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The Oil Man's Calendar

MAY 12	East Texas Chapter, American Petroleum Institute, Kilgore, Texas.
13–15	Natural Gasoline Association, Mayo Hotel, Tulsa.
	A.P.I. Mid-Year Meeting Canceled.
22	Kentucky Oil & Gas Association, Lexington, Kentucky.
JUNE 6	American Petroleum Institute, Illinois Basin Chapter, Robinson, Illinois.
6	Illinois-Indiana Petroleum Association, Robinson, Illinois.
8–11	American Society of Mechanical Engineers, Cleveland, Ohio.
OCT. 8–10	Texas Mid-Continent Oil & Gas Association, Dallas.
12	National Stripper Well Association, Wichita, Kansas.
20–22	Independent Petroleum Association of America, Wichita, Kansas.
NOV. 9–13	American Petroleum Institute, Chicago.

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The Changing Panorama

Washington Ignores Peculiarities of Oil

IN THE viewpoint of the federal government oil is an industry rather than an aggregation of big corporations, small corporations and individuals. This attitude, the result of circumstances, is working hardship on the segments and individual units within the industry.

For instance, five large corporations have formed the Neches Butane Products Corporation at the instance of the government. No group of small concerns or individuals has facilities so concentrated that they could provide the raw materials that will go into the largest of the butadiene units, from which the industry will furnish part of oil's share in the synthetic-rubber program.

Again official Washington looks to the oil fields for certain grades of crude oil, chiefly those with highest octane rating. This oil is essential. The result is that other fields are neglected and in turn certain producers are neglected.

The practice in the industry of looking to the independent refiner as a purchaser of crude oil, runs counter to the necessary attitude at Washington. Many of the smaller refining concerns have neither plant capacity nor personnel for undertaking the manufacture of 100-octane gasoline, butadiene or toluol. Their fuel oil is a critical product but the gasoline that is being made along with fuel oil must fight for a place in a diminishing market, influenced chiefly by transportation, especially along the Gulf Coast.

When he is operating, the independent refiner bumps headon into another phase of the Washington attitude. The integrated concern, backed by its own production and transportation, may operate at existing prices and show either small profit, break even, or a small loss. Officials look at the situation from an overall viewpoint. The independent refiner, however, must pay the posted price for crude oil and the net result may be an excessive loss.

It looks like the independent refining concern will have to resort to ingenuity. While the critical-products plants are being built is the time to gain entry by finding means of furnishing some of the special cuts that will be required for these units.

Anything the independent refiner can accomplish will aid the independent producer. Meanwhile the two of them are besieging Washington with pleas that the segments and the individual units of the industry have the spotlight turned on them.

Let's Cry a Little Over Spilled Milk

THE well-worn phrase "too little and too late" characterizes the petroleum transportation situation. East Coast shortage, rationing and schemes proposed for last-minute drastic relief of the situation, combine to show how well some forecast developments when they first advocated construction of overland carriers.

Had the "big-inch" carrier been put through when first projected, rationing and curtailed crude production would not be nearly the problem it is today, and none of the present costly expedients would be considered except perhaps to a partial degree. And, had the line even been under construction, tanker losses would have been less, or would have been attained by the Axis only by a wide and inefficient distribution of submarines against interocean traffic, instead of the fatally easy method of pot-shots at vessels blindly following peacetime coastwise routes in large numbers.

Steel scaracity prevented construction of the "big-inch" line when it was finally proposed by the industry, and although each day more and more proves how much it would have been worth, it still is an improbable proposition. However, if any of the currently considered relaying of lines had been worked out before conditions became so serious, much of what the big line could have accomplished would have been achieved. Time is the important consideration today. It is to be hoped that an all-out effort is made at once to speedily relay all the proposed systems.

Eastern Stress Will Strain Other Areas

MORE stringent rationing is due for the East Coast region, and since additional tank cars are to be taken from service in the Middle West and Southwest, shortages are expected to develop in these areas also.

Approximately 45,000 tank cars currently are being used in transporting 600,000 barrels of petroleum to the East Coast each day, and the country is being scoured for an additional 14,000 cars in an attempt to raise the daily delivery of oil to the east by rail to 800,000 barrels. Other overland movement amounts to about 175,000 barrels per day, giving a total still considerably short of the estimated essential need for 1,200,000 to 1,300,000 barrels of petroleum on the East Coast. This essential demand estimate already includes a cut of 25 percent in the consumption of gasoline and of 10 percent for all light heating oils, and assumes the conversion of many heavy-fuel-oil installations to coal.

Vital defense industries and Army and Navy needs must receive 100 percent of their requirements. Home owners who cannot convert their oil-burning heating plants to coal are asked to get along with less heating oil, but since they cannot be expected to live in unheated residences this reduction cannot be severe. All this means that gasoline for passenger cars necessarily have to be curtailed far more than its proportionate share of the shortage. This explains the stringent gasoline rationing plan for the East Coast.

Naturally, as the percentage of transportation facilities placed in Eastern service increase, shortages are in prospect for most parts of the United States because of inability to deliver. Even sectors near large refining centers are dependent upon some transportation means for their petroleum supply. As tank cars are diverted to Eastern service, tank trucks will be called upon to cover a larger and larger territory, which means they will be forced to prorate their deliveries. Hence the talk of nationwide rationing of gasoline is based

upon something more concrete than wind.

However, the urgency of getting rid of as much gasoline as possible in large refining centers so refiners can continue the manufacture of war petroleum products unhampered by lack of storage, indicates the application of a uniform nation-wide rationing scale (favored by OPA) would be illogical. The effects of war do not have equal influences on individuals or sectors of the country. Therefore, why not base gasoline rationing on local supply and transportation conditions, as suggested by OPC heads. That is the basis upon which crude-oil production is restricted, and the Eastern, Middle West and Mid-Continent are getting all the best of it over the Southwest territory.

Texas Producers Are Put in Tough Spot

WITH more than half of Texas' 100,000 wells facing the gloomy prospect of being closed in most of the time, in view of transportation troubles that caused OPC to recommend the state produce but 960,000 barrels daily during May, including 85,000 barrels of natural gasoline, a most aggravated proration and economic problem faces operators of the state.

The serious cut in federally-recommended rate of crude production for the state is shown by comparing the 875,000-barrel per day May recommendation with the 1,596,000 barrels per day in February. Meanwhile, the need for aviation gasoline and pipe-line outlets has resulted in discarding any equitable proration program. With approximately 407,000 barrels to be assigned fields producing aviation gasoline crudes, and to the more favorably situated transportation areas of West Central, North Texas and Panhandle districts, and an additional 236,000 barrels to marginal and other shutdown exempt fields, there will remain only 232,000 barrels to distribute among more than 54,000 wells. The Texas Railroad Commission would welcome any genius who could figure out some means of solving this puzzle. If the state is curbed to the federal-recommended level, and transportation limitations indicate this is all that can be expected, the latter group of wells can average but 4½ barrels daily, although some of the state's biggest producers are in the group. Thus, it appears that these wells can be permitted to produce but six days during May, and if an additional cut is recommended a month hence they face the prospect of being closed in all the time. It seems unfair to close in these wells, when poorer producers (strippers and water-yielding wells) have a better fate, but what less is there to do?

Faced with so much idle productive time, it may prove advisable for operators to adopt some of the cooperative consolidation of field operations suggested by L. F. McCollum (page 9, THE OIL WEEKLY, April 13), and for the commission to cooperate with them in arranging production schedules.

Oldest producing well in the United States is located two miles north of Oil City, Pennsylvania. It was drilled in 1861, only two years after Drake's discovery and has been pumping away month in and month out for 81 years.

Converting to Coal Involves Difficulties

CONVERSION of heating plants and dwelling furnaces from fuel oil to coal, being encouraged in the East because of transportation difficulties, is subject to certain limitations. One of these is availability of grates and subsidiary equipment needed to make the change unless the plant is designed to burn either oil or coal.

It has been estimated that in 30 to 40 percent of the homes furnaces cannot be converted because of inherent limitations in their design which makes them unsuitable for burning coal. Home owners are up against restrictions on the purchase of coal-burning equipment also. Priority difficulties face those wishing to purchase such equipment. Likewise, considerable new equipment will be required if oil-burning heating plants are converted to coal, and in the majority of these instances boilers are direct-connected to hot-water systems. If coal is substituted, the anticipated drop of 20 to 25 percent in boiler capacity would require new hot-water tanks and heaters be installed.

Local Tax Rates Will See Sharp Increases

WHILE the oil industry henceforth, along with all industries, will carry a much heavier tax burden in consequence of impending sharp increases in federal income taxes, it also faces the threat of higher state taxes.

In the Southwest numerous taxes are paid by oil companies to the states, counties, school districts, cities and municipalities. In Texas, for example, there has been a total revenue for all taxing units amounting to about 11 cents for each barrel of oil produced. The revenue has gone importantly toward support of many state and local government functions. Whereas Texas crude production averaged 1,532,000 barrels daily in December, 1941, it will be around 1,000,000 barrels in May, a decrease of 37 percent; and revenue from the gross production tax has been curtailed similarly. New Mexico and other southwestern states, likewise, are confronted with serious problems of carrying on public activities that have been supported substantially by the petroleum industry.

State taxes on gasoline, paid by the motorists, have been among the more substantial tax sources. Each year these receipts have increased. This year, however, there has been not only an absence of the usual increases, but some states has shown decreases instead. In January, 1942, only 8 states collected less gasoline taxes than a year previous. In February, a dozen states showed decreases from a year earlier, while nearly all others registered smaller gains than normal. In March, there was a further increase in the number of states that dropped below the 1941 level in gasoline tax collections. As the year progresses, this shrinkage in gasoline-tax revenues will be accentuated sharply.

All states are faced with the necessity of finding new tax sources. For the oil industry, a realistic course under these circumstances would be to anticipate the probability of pressure for higher tax rates and new taxes.

WASHINGTON ROUNDUP

By B. F. LINZ
Washington Correspondent

East Coast Pleasure Motorist Ration Will Be 2 to 3 Gallons Weekly

Pipe Line Recommendations Made by PIWC

Senate Passes Bill Providing Funds for Oil Barges

Tank Cars Go Under Government Agency Control

RATIONING continued to be the major subject of importance last week, with all activities in Washington oil circles revolving around the approaching limitations on the consumption of gasoline.

The various problems which must be met to restore the East Coast supply — pipe-line construction particularly — were the subject of consideration at the May meeting of the industry war council and at hearings of two Congressional committees.

While a special subcommittee of the House Committee on Military Affairs conducted an inquiry into the oil supply behind closed doors, the Cole subcommittee of the House Interstate and Foreign Commerce Committee heard Coordinator Ickes and Price Administrator Henderson.

Costs and prices also came into the picture more importantly during the week, as company executives admitted that the expense of rail transportation in the face of markets due shortly practically to disappear was becoming a more than uncomfortable burden. But they received sympathetic news from Washington in the shape of intimations that the federal government may assume a good part of that expense in the near future.

This week, the OPC is expected to disclose the program it has decided upon for construction of pipe lines, but there was little reassurance that WPB would abandon its opposition to the use of steel for that purpose, leading to the possibility that the only lines run up toward the East might be those which could be constructed with used pipe.

Gasoline Rationing to Be 50 Percent of Normal Use

Meeting with WPB officials May 5, Coordinator Ickes recommended that the consumption of gasoline during the preliminary rationing period—up to July 1—be held to 50 percent of normal and that at the same time deliveries of heating oils be correspondingly reduced.

The board adopted the recommendations, and rationing will be based on a 50-percent cut which, it was said, will probably mean that the average non-essential motorist will have no more than 40 percent of the gasoline he normally would use. Just what that would mean in terms of weekly rations, however, continued to be a secret.

The cuts in delivery to 50 percent of gasoline and heating oils will become operative May 16, but the rationing program will go into effect the preceding day, as originally planned.

Card rationing of gasoline on the East Coast will not apply to commercial users of motor fuel, it was emphasized last week by OPA, but their consumption will be controlled by orders of the Office of Defense Transportation requiring the elimination of all "luxury" or non-essential services.

How broad an area may be covered by rationing in the future will depend entirely on developments in the transportation situation, and so long as transportation facilities continue ample to meet all requirements in a particular area, OPC "sees no reason for compelling a reduction in gasoline consumption in that area," it was stated by Deputy Coordinator Davies May 5.

Henderson and Ickes Paint Dark Picture for Cole Committee

Disclosing that pleasure motorists in District 1, modified by the eliminating of western New York, western Pennsylvania and western West Virginia, would have an allowance of between two and three gallons of gasoline "and nearer two gallons" a week until permanent card rationing goes into effect in July, Price Administrator Leon Henderson last week told the Cole Oil Subcommittee that he saw little immediate prospect of improvement in East Coast supplies.

Appearing before the subcommittee May 8 to supplement the testimony given earlier in the week by Coordinator Ickes, the price administrator said that the two-gallon ration which will go into effect May 15 will be "basic" and that persons using their cars to get to and from their work or for other essential purposes would be given additional supplies. No limitations whatever will be imposed on commercial vehicles, he said.

Under sharp questioning from members of the subcommittee, he said that efforts were being made to work out means of compensating the companies for the additional expense involved in overland movement of oil, but gave no hope that they would be reimbursed for past losses.

Expressing the belief that "we are rapidly reaching the stage where we cannot depend on tankers," Coordinator Ickes disclosed that the outlook for steel priorities for the proposed Texas-New York pipe lines is not very promising.

Appearing before the committee

to discuss newspaper reports that the rationed gasoline allowance would be very small, Ickes told of the efforts which are being made by OPC and the industry to increase the overland flow of oil to the East Coast, but left it to Henderson to disclose just what amount of gasoline would be securable by the coupons to be used after May 15.

He told the committee, however, that despite the curtailment in deliveries of gasoline and oil, the East Coast inventories dropped 7,700,000 barrels between February 14 and April 11, on the latter date being 15,218,000 barrels below a year ago.

"Obviously," he commented, "we cannot continue to draw heavily upon these stocks indefinitely, or we should, one day, run entirely out and should then be entirely dependent upon our shrunken day-to-day supplies."

Most important problem now to be dealt with, the coordinator pointed out, is that of building up stocks against next winter's demand, and it is to this end that the impending rationing will be directed.

By "perfectly amazing" achievement, the oil companies and the railroads are bringing in approximately 600,000 barrels of oil daily by rail, and another 175,000 barrels is moving by other overland or safe water transportation, but there is still a deficiency of 400,000 barrels in meeting the minimum demand based on present restrictions, he said.

"This means that we are still 400,000 barrels per day short of our goal, which is to build up these substitute facilities to the point where we can, if necessary, be entirely independent of water transportation for the duration of the war," he added. "You see, I am the same old pessimist—acting on the theory that it is always safest to be ready for the worst."

Ickes explained that efforts are being made to increase the rail movement still further, and it is planned to attempt to secure another 15,000 tank cars, but he admitted there is doubt as to how far the railroads can go, particularly in the face of the peak loads which will come next fall.

"This much can be said, however," he told the committee: "Even with tank cars operating at

[*Continued on page 38*]

PIWC Turns Attention to Rationing Problems, Pipe Lines and Prices

Rationing, pipe-line construction and prices constituted the outstanding subjects of discussion in the May meeting of the industry war council last week, but the oil men took time out to resent what they considered a slur and demanded that Coordinator Ickes rescind Recommendation No. 47, dealing with the abandonment of wells.

"It is not the practice of the petroleum industry to abandon wells, the operation of which may be economically sustained," Ickes was told in a formal resolution.

In another resolution, seeking to eliminate the multiplicity of reports the industry is required to render to various government agencies, the council recommended that all government reports and questionnaires be cleared through OPC.

With lubricating oil assuming a major place in the list of products required for military service, the council expanded its container subcommittee to be the lubrication and container subcommittee, increasing its membership from 5 to 15.

The pipe-line projects which have been under engineering study for the past month were thoroughly discussed during the meeting and recommendations sent along to the coordinator which it is expected will be disclosed by OPC this week in a program of construction designed to free the East from its deficiency of transportation.

There was extensive discussion of the financial situation of the industry, in which WPB and OPA officials participated, and assurance was given the companies that the government was studying the cost problem with a view to taking steps to relieve the suppliers. With the transportation pool operating at a deficit, OPA officials indicated the possibility that the government would make a direct contribution to cover the additional cost of rail transportation.

Discussion of costs and prices disclosed that the industry rapidly is switching from a gasoline to a fuel-oil economy, as a result of the threatened elimination of the gasoline market as a result of rubber and transportation shortages.

With all of these matters inextricably involved in the rationing situation, they were of necessity touched upon by the committee on petroleum economics in an exhaustive report on the East Coast situation submitted by Chairman Robert E. Wilson.

In presenting the report, Dr. Wilson emphasized that the industry's productive and refining capacity and marketing facilities remain intact despite the pressure of war demand, but that the difficulties are due entirely to the sinking, slow-up or diversion of the great bulk of the tanker fleet.

"A year ago these tankers were bringing in 95 percent of the East Coast supplies," he said. "Due to remarkable efforts on the part of the industry, nearly two thirds of our normal supplies now are being brought in by other more expensive means of transportation."

In its resolution urging that the well-abandonment recommendation be rescinded, the council called attention to a report of a special committee in February in which it was warned that "placing restrictions against an operator abandoning a well which he no longer deems an economic operation would not prevent the operator from discontinuing to pump his well but it would have the effect of prohibiting him from salvaging the material in order to use it elsewhere, freezing the material in the ground and to a degree defeating the purpose of the order."

Minimum essential requirements of District 1 for over the next eight months, including the necessary rebuilding of stocks from present distress levels, was placed at 1,265,000 barrels a day in a report on the East Coast situation submitted to the council by the committee on petroleum economics.

Present methods of non-tanker transportation, plus crude production in the district and allowing for an average of 700,000 barrels a day by tank car, will fall short of that figure by 250,000 barrels, it was estimated.

The committee admitted the possibility that railroad movement could be increased beyond the 700,-

000-barrel figure but expressed doubt if such a movement could be sustained during the peak of the railroad load this fall or under the difficult traffic conditions prevailing in the northern states during the winter.

"The above estimates include only the barest of essential needs, since they assume a 60 percent reduction in the average use of gasoline per passenger car," it was pointed out. "Such a drastic reduction would mean elimination of gasoline for many uses of passenger cars since essential uses by doctors, nurses, workers in war plants, etc., must be covered first. Substantial hardships could be avoided if the reduction could be limited to 40 percent instead of 60 percent. Similarly, this minimum essential demand assumes a reduction of 20 percent in the consumption of domestic fuel oil per burner, and 10 percent conversion to coal, which again involves hardship. To care for the situations which involve hardships but do not represent needs fully essential for the war effort will require a movement of an average of 160,000 barrels per day additional."

Steel and Costs

"The analysis of the steel and capital requirements for various methods of transportation brings out many interesting points when studied in detail," the report commented. "Outstanding points are that, even allowing for substantial inefficiency in operation under war conditions, tankers require less steel than any other method of transportation. Large product pipe lines and barges come next, large crude lines next, and tank cars about the last.

"Up to date, the committee on petroleum economics has largely confined its discussions to the physical rather than the cost factors involved. The present financial situation is so serious, however, that the committee must emphasize at the outset that the widespread readjustments the industry has had to make in its transportation, refining and marketing operations have brought many companies in the industry, particularly those operating mainly on the East Coast, to a point where their working capital is being rapidly impaired, and their ability to carry on and to finance needed war facilities is jeopardized.

"Price adjustments have necessarily lagged and have been grossly inadequate to cover the staggering costs imposed by the losses and diversions of tankers and the extraordinary efforts of the industry to offset these and keep their customers supplied. These terrific cost burdens cannot be carried much longer as they are already threatening the solvency of many companies and may shortly cause a complete economic breakdown of the industry."

May Spread

In a detailed analysis of the situation, the committee warned that the deficiency on the East Coast may spread to other sections of the country, since "if measures now being taken are not adequate to provide sufficient tank cars, it may be necessary to restrict consumption in areas other than District 1 to release cars and provide nearer sources of supply."

"That a heavy load is being placed on the railroads is apparent from the fact that the present 600,000 barrels daily movement corresponds to approximately 9 percent of the total daily average ton-miles of freight handled by all the railroads in the United States in 1941," it commented. "In the heaviest traffic railroad districts through which present tank car supplies are passing, this figure is almost 20 percent.

"An unfavorable factor affecting tank-car movements is the possible necessity of providing substantial additional product outlets to plants in the Gulf Coast area requiring certain minimum crude runs to produce required special war by-products, which would mean diversion of tank car movements into the longer haul from District III to District I," it added. "Similarly, the necessity of moving more residual fuel oil by tank car to meet the critical fuel oil situation on the Atlantic Seaboard may interfere with present tank car schedules and introduce delays in unloading, particularly if tank cars coiled for heating are not adequate for this movement. In this connection, the committee feels that it would be desirable to provide for an increase in gravity of residual fuel oil produced in District II, and to the extent necessary, in District III. This, in the case of District II, would provide additional fuel oil at points nearer the Atlantic Seaboard. It would also lessen the viscosity of fuel oil supplies and thus facilitate the unloading of heavy fuel oil, particularly in the case of tank cars with no heating facilities."

The essential demands as defined in relation to current supplies "imply an adjustment both for the industry and that is greater than any heretofore visualized," the council was told.

"The reduction of current overall consumption to essential demand would involve tremendous administrative difficulties and lead to serious industrial problems which will demand comprehensive consideration and action.

"The indicated difference between the sum total of non-tanker supplies and essential demand is of such a size that it might be met by an increase in tank car movement through more effective coordination between the industry and the railroads. However, to the extent this is not accomplished, the only alternative solution is supply by tanker until added transportation is provided by major pipe-line construction."

More Rail Movement

On the basis of foreseeable supplies as against the estimated essential demand, the committee's report indicates that between 700,000 and 800,000 barrels daily of crude and products will have to be brought into District I by tank car in order to satisfy essential consumption over the next 5 months. Recent rates have approximated 600,000 barrels daily.

"Assuming that available transportation will be so distributed as to meet the essential demand for each product, it may be assumed that 2,720,000,000 gallons of gasoline will be available to meet all of the essential use to which the 9,700,000 passenger cars in Coordinator's District I will be put. The foregoing indicates that if all of the passenger cars in the district were used to the same degree of essentiality, the supply of only essential demand would mean 5.4 gallons per car per week during the next 5 months. This average figure would obviously not apply to all of the passenger cars in District I. The cars used primarily in essential use would receive more and those used in relatively non-essential use would receive less."

Are You Wasting Oxyacetylene?

Pyramiding Demand Makes Strictest Conservation Essential War Effort

IT IS almost inevitable that in the rapid expansion of oxyacetylene welding and cutting, there should be a period when wasteful practices are prevalent. Furthermore, the wholesale addition of thousands of inexperienced operators has considerably aggravated this condition. There is no question that the conscientious welder or cutting operator is concerned about eliminating waste, when he knows its source. This article, therefore, is intended to serve as a "check-list" that will help all concerned in preventing a serious oxygen supply situation from becoming critical.

Keeping war production industries supplied with an unceasing flow of oxygen and acetylene for welding and cutting is no less essential than providing the metals needed for production. Demand for these gases has increased enormously. For some time, gas manufacturers have been hampered in their efforts to meet this demand by a shortage of cylinders to transport the gases. Now, there has arisen another source of concern. The oxygen production capacity of the oxyacetylene industry is being strained to the fullest extent, in attempting to keep abreast of constantly pyramiding oxygen requirements. In spite of additions and expansions of oxygen and acetylene plants, a critical situation faces this industry — and all industries consuming these gases — unless efforts are made by everyone to conserve, particularly in the use of oxygen.

A survey has revealed a considerable number of shop practices which might be disregarded in peacetime, but which today must be considered wasteful. These habits of yesterday, being largely unconscious, can be remedied only by a re-evaluation of the significance of such seemingly trivial practices as using the wrong size hose or torch tip, or opening up a full cylinder when a quarter-full cylinder stands idle.

The following illustrated list of recommended practices is based upon observations of correctable conditions in oxyacetylene welding and cutting shops. The elimination of wasteful practices will not only go a long way toward relieving the "tight" oxygen situation, and insuring an uninterrupted supply of gases, but will also prove economical to the individual shop where such conditions prevail. One shop, for example, was found to be unconsciously wasting approximately 25 percent of its oxygen consumption, through an accumulation of "insignificant" losses.

Essentially these suggestions involve but one basic concept — to uproot yesterday's habits to meet today's demand. None of the recommendations is difficult to accomplish, provided we open our eyes to every-day practices which should no longer be tolerated. Industry needs many waste wardens; they may be unofficial, they may be self-appointed, but if they watch out for wasteful practices among themselves and their co-workers they will be performing a very real service.

Recommended

USE PROPER SIZE TORCH TIP. Check tip size, an oversize tip wastes gas. If number is not clear, check with cleaning drill. A No. 2 tip used instead of a No. 1 for cutting ½-inch plate consumes 10 to 20 percent more oxygen, 16 percent more acetylene—all wasted.

Arkansas Contributes Much to Sound Conservation Methods

By GORDON B. NICHOLSON, Staff Writer

ARKANSAS continues to furnish valuable oil and gas reserves, consistently expanding its potentialities, uncovering new reservoirs of oil and gas, erecting refineries, and instigating sound conservation methods. Engineering developments of national interest are being used with valuable results in Arkansas oil fields, such as repressuring programs which are adding many thousands of barrels of recoverable oil and gas to reserves, and development of a gas-purifying industry which converts sour gas into industrial fuel, with production of sulphur as by-product of the process.

The oil industry is contributing more than fuel oil and gasoline to the war effort. Perfection of methods of purifying sour gas liberates this previously worthless product as fuel for industrial plants. Partly as a result of this development, essential war industries are being established in the state, with production of materials on a large scale possible because of accessibility of high grade fuel.

During a few years, the value of scientific and economical conservation practiced in Arkansas has become obvious, with magnitude of oil, gas, and condensate producing capacities easily recognized from reports of engineering studies. Probably the most important development is the conservation program adopted by the Arkansas Oil and Gas Commission, which includes fullest cooperation with the national government in the efficient use of limited supplies of materials and at the same time encourages carrying on a sound development program.

Oil and gas production has constituted one of the principal industries since discovery of the first commercial production at El Dorado in January, 1921, exactly 20 years after completion of the famous Lucas Gusher at Spindletop. Following closely after discovery of the large Smackover field, daily production reached 457,000 barrels in 1925. This peak, occurring at a time when conservation was an unknown practice, was followed by a rapid fall to 175,000 barrels by the end of the same year. Lack of understanding of conservation contributed to the gradual decline which followed, and a low of 23,000 barrels daily for the state was reached in 1935, the result of a period of appalling waste.

Uncovering of deep production, particularly from the Smackover lime, added to the reserves of the state, and since that time, daily production has steadily increased, amounting to 25,887,000 barrels for 1941, or more than double the production for 1937, the year in which limestone production was discovered. Present indications point to increased production during 1942, and the outlook for the future is bright.

Conservation Practices

With the development of knowledge of conservation methods, Arkansas stands among the most prominent advocates of practices for receiving greatest benefit from natural resources. At present, the state, along with its valuable contribution to the oil and gas and condensate reserves of the United States, also sets an example by furnishing outstanding methods to conserve these vital petroleum products. Well regulated schedules of allowables for oil and gas wells are determined by engineers of the Arkansas Oil and Gas Commission after detailed field engineering tests are made, and enforcement of rules assigned to fields and wells is a foregone conclusion. Complete and detailed records are available in the commission offices, giving up-to-date reports on all fields in the state, and variations in these reports, which are compiled frequently, furnish specific knowledge of field and reservoir trends.

The oil industry in Arkansas represents minimum waste of natural resources. Proration and allowable schedules are designed to provide the greatest ultimate recovery of oil and gas, and there is little waste of these products in the drilling, completion, and producing of wells, or in the manufacture of by-products. While in many other oil-producing states, venting to the atmosphere of casinghead gas containing hydrogen sulphide is not considered as waste, it is in Arkansas, and for that reason a new industry is coming to life, consisting of removing hydrogen sulphide from gases produced in Southern Arkansas, fitting the sweetened gas for domestic or industrial services, and separating the sulphur for industrial use.

With discovery of the Midway field on the first day of 1942, Arkansas' total of prorated fields, including oil and condensate, became 13, of which 10 are oil and 3 are condensate fields. Wells producing in these fields in March, 1942, included 265 oil and 26 condensate wells, and reserves remaining in these fields total 301,168,578 barrels. The controlled fields still contribute, by a wide margin, the bulk of production of the state. Pipeline reports indicate that settled fields produced 682,036 barrels of oil in January, while fields under proration produced 1,555,695 barrels, to furnish Arkansas with a total of 2,237,731 barrels for the month. Remaining reserves of the state, including those of both settled and prorated fields, amounts to 361,818,578 barrels. Drilling continues at a rapid pace in several of the prorated fields, while a number of wildcat tests are continually being drilled.

Prorated development of state resources leads to anticipation of large percentage of recovery from

FIELD	COUNTY	Discovery		Producing Formations			Producing Depths, Feet	Proved Acres	Producing Wells (Mar. 1, 1942)	PRODUCTION DATA					
		Date	Method	Name	Age	Type				Pool Daily Allowable	Total Production During 1941	Cumulative to March 1, 1942		Estimated Remaining Reserves (Barrels)	Recovery per Acre to Mar. 1942
												Oil	Gas M.C.F.		
FLUSH OIL FIELDS															
Atlanta	Columbia	12-39	Geoph.	Reynolds	Jura	Lime	8200	800	20	2,877	1,018,284	2,031,187	2,908,261	5,598,813	2,501
Buckner	Columbia-Lafayette	11-37	Geoph.	Reynolds	Jura	Lime	7200	1,040	27	2,504	814,361	2,764,827	672,590	8,135,173	2,658
Dorcheat	Columbia	8-39	Geoph.	Reynolds	Jura	Lime	8895	720	19	2,071	668,985	1,242,992	12,027,478	15,757,008	1,726
Magnolia	Columbia	3-38	Geoph.	Reynolds	Jura	Lime	7450	4,494	115	18,948	904,588	19,456,087	17,286,410	160,543,913	4,329
Midway	Lafayette	1-42	Refl. Seis.	Reynolds	....	Lime	6340	....	8	1,600	....	25,026	68,821	17,974,974	....
Mt. Holly	Ouachita	11-41	Surf. Geol.	Reynolds	....	Lime	7166	80	2	450	10,995	16,422	98,532	2,483,578	205
Schuler, East	Union	....	....	Morgan	....	Sand	5783	160	5	....	43,461	....	....	....	....
Schuler-Jones	Union	9-37	Geoph.	Jones	Jura	Sand	7550	2,944	42	13,500	4,928,381	21,841,717	27,631,330	34,158,283	7,412
Schuler-Reynolds	Union	10-37	Geoph.	Reynolds	Jura	Lime	7650	606	15	2,424	877,493	3,351,813	5,575,506	2,648,187	5,531
Village	Columbia	5-38	Geoph.	Reynolds	Jura	Lime	7380	440	12	1,191	358,541	1,209,568	6,103,128	2,790,432	2,749
Total	....	....	....	....	....	....	....	11,284	265	....	9,625,081	51,909,639	72,372,056	250,090,361	....
FLUSH CONDENSATE FIELDS															
Big Creek	Columbia	12-39	Geoph.	Reynolds	Jura	Lime	7957	160	2	1.45 per acre	42,379	81,743	2,112,557	2,918,257	510
Macedonia	Columbia	7-41	....	Reynolds	....	Lime	8815	480	9	1.875 per acre	111,821	202,378	2,529,527	11,797,622	421
McKamie	Lafayette	6-40	Refl. Seis.	Reynolds	Jura	Lime	9098	2,560	15	1.25 per acre	904,588	1,137,662	8,870,203	36,362,338	440
Total	....	....	....	....	....	....	....	3,200	26	....	1,058,788	1,421,783	13,512,287	51,078,217	....

Figures from Arkansas Oil and Gas Commission.

oil and gas fields. If the nation should need more oil during the war emergency, it is estimated that Arkansas can produce daily about 500,000 barrels of oil and condensate for a considerable time. This overproduction would involve considerable waste, and engineers estimate that the ultimate recovery of oil and condensate would be reduced by about 25 percent. If half that amount, or 250,000 barrels were produced daily, estimates are made to the effect that loss of ultimate recovery would not exceed 15 percent. Present daily production is only 71,500 barrels, the rate set by the Office of Petroleum Coordinator for National Defense, and this volumetric allowable is even less than figures based on the long established custom of the Oil and Gas Commission to regulate production of all pools to conserve reservoir energy and obtain the highest ultimate recovery.

Seven refineries in Arkansas handled a combined total of 1,195,586 barrels of oil during January, having average daily runs of 37,931 barrels to stills. Eight gasoline plants in January processed 1,851,872 million cubic feet of gas. Output of the products manufactured by the plants during the month includes 897 barrels of condensate, 82,616 barrels of gasoline, and 22,441 barrels of butane. During the same month, 3,407,912 million cubic feet of casinghead gas was produced from 283 wells, and large quantities were used for gas lift, recycling, gasoline plants, pipe lines, and drilling operations.

Production is reduced to an even lower figure than the commission estimates of optimum recovery due to a condition necessitated by present emergency transportation difficulties, and future allowables may be cut further. Thirteen oil and gas fields are operating under state control, while, of the total of 28 pools, the remaining are classed as stripper fields, including Smackover, El Dorado, Troy, and others. These fields are allowed to continue to produce all the oil that they can, while the reduction necessitated by transportation and war emergency is met in the 13 prorated pools. These state-controlled fields have suffered a decrease of about 10,000 barrels daily since the war started.

Repressuring Systems

One of the most interesting procedures and one on which considerable emphasis is being placed in Arkansas is installation and operation of repressuring projects. The large Schuler plant has now been completed long enough to show decisive benefits. This plant, a million dollar project including pressure-maintenance and gasoline extraction units, was placed in op-

Arkansas Sour Gas Fields

NAME	Discovered	Depth[2]	RESERVES[1]		DAILY PRODUCTION		Btu Value	H_2S per 100 Cubic Feet	Delivery Pressure[3]	Possible Sulphur Daily (In Tons)
			Oil	Gas	Oil	Gas				
Atlanta	12-19-38	7900	6	10	2,877	4,603,000	1,100	1,800	1,500	5.9
Big Creek	12-23-39	7960	3	67	241	6,025,000	950	335	3,000	1.43
Buckner	11-31-37	6900	8	1	2,504	676,000	1,000	167	[4]	0.8
Dorcheat	8-28-39	8650	18	144	1,988	21,027,000	975	2,400	2,000	36.0
Magnolia	7- 8-41	8650	161	200	18,948	16,845,000	1,082	895	[4]	10.7
Macedonia	3- 5-38	7100	12	184	900	12,150,000	....	1,900	2,000	16.4
McKamie	6- 8-40	9200	37	427	3,200	22,080,000	986	4,500	3,000	70.9
Mt. Holly	11- 4-41	7100	5	10	400	1,600,000	....	374	500	0.43
Jones Pool	9-17-37	7300	35	50	13,500	24,300,000	1,000	30	[4]	0.52
Reynolds Pool	10-22-37	7400	3	5	2,424	2,133,000	987	865	[4]	1.34
Village	5-26-38	7050	3	10	1,191	5,717,000	900	374	[4]	1.53
	....	....	291	1,108	48,173	117,156,000	....	....	....	145.95

[1] Oil in millions of barrels, gas in billions of cubic feet. [2] Below sea level. [3] Possible pressures at which gas could be delivered to a pipe line. [4] Production practice in Buckner Field does not permit back pressure. Other fields connected to gasoline or repressuring plants.

Development in Arkansas Flush Fields

Completion Data for 1941			Properties of Crude Oils			PRODUCTION AND ENGINEERING DATA													
						Gas/Oil Ratios		Bottom Hole Pressures			Overall Recovery Per Pound Drop		Recovery Factor Percent	Gas. Oil Contact Feet	Water Level (Sub-sea) Feet	Porosity Percent	Permeability (Millidarcys)	Connate Water (Est.) Percent	Shrinkage (Est.) Percent
Oil Wells	Dry Holes	Total	Gravity API	Sulphur Percent	Vis. at 100° F.	Original	Present	Original	Present	Daily Change Since Nov. 1941	Oil (Bbls.)	Gas (MCF)							
FLUSH OIL FIELDS																			
5	..	5	44	0.49	35	837	1,655	3,821	3,535	—0.29	6,997	10,168	50	7943	8000	15	1,276	25	35
4	..	4	32	1.87	51	300	270	3,195	2,621	—0.35	4,817	1,172	40	None	7010	20	50	25	16.5
8	..	8	56	0.39	30	1,150	10,245	4,243	3,456	—1.0	1,579	15,283	50	8600	8660	13	155	No Tests	No Tests
1	3	4	38	0.89	39	700	899	3,465	3,100	—0.31	53,304	47,360	60	7138	7300	18.5	1,500	20	34
1	..	1	39.5	....	....	275	275	2,915	2,900	.....	1,668	4,588	50	In Sol.	6238	20	500	20	15
..	2	2	38	....	....	2,100	9,000	3,180	3,180	.....	16,422	98,532	50	6920	6940	20.5	1,130	25	30
3	..	3	....	....	....	.....	900	.....	1,980	.....	.....	.....	..	....	....	....	....	....	....
..	..	..	34	1.40	48	760	295	3,520	1,487	.....	10,744	13,591	30	7280	7380	17.6	355	15	44
1	1	2	38	0.91	42	700	880	3,550	3,363	+0.16	17,924	29,816	50	7394	7420	20	1,500	20	30
1	..	1	41	0.80	37	1,876	5,911	3,350	3,230	—0.29	10,080	50,859	50	7101	7123	20	2,000	20	30
24	6	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....	.....	.....
FLUSH CONDENSATE FIELDS																			
..	..	..	66	Sour	Low	26,000	26,000	3,723	3,723	.....	No Drop	No Drop	50	Gaseous	7730	12.5	250	20	....
5	..	5	60	....	....	13,500	10,721	4,130	3,922	—1.13	973	12,161	50	Gas Field	8660.	14	229	No Tests	....
13	1	14	58	0.24	Low	8,900	6,756	4,365	4,224	—0.18	8,069	62,909	50	Gas Field	.....	17	400	20	....
18	1	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....	.....	.....

eration in the early part of 1941, injecting gas into the Jones sand, one of three producing formations in the big field.

With virtually all gas being produced from the Jones sand now being returned to the formation, the early rapid decline in bottomhole pressure has virtually ceased. Besides the gas actually removed from the producing horizon, additional gas is being brought in from the Village, Atlanta, and Magnolia fields, and is injected into the Jones sand as part of the pressure-maintenance system. The pool continues to produce 13,500 barrels daily from this sand, according to the latest Oil and Gas Commission reports.

A close degree of cooperation was obtained from operators in the field to receive the greatest ultimate benefit from the repressuring projects, with full aid and support given by royalty owners. An operators committee composed of five men is in charge of the program, and Lion Oil Refining Company operates the unit. Service to the Arkansas oil industry is fully realized by conservative estimates which predict that the increase in recovery of oil in the Schuler area will amount to 10,000,000 barrels, and many engineers believe that the figure may rise much higher during operation of the repressuring program.

Plans are being made for launching a second repressuring project involving the Cotton Valley formation above the Jones sand at Schuler, covering the same unitized zone which is included in the Jones sand program, and designed mainly to increase recovery from the lower levels, although, at the same time, production from the Cotton Valley section would also be procured. The plan consists of pertorating wells at higher levels in search of both oil and gas, with the gas to be returned to the Jones sand in addition to that now being injected into it.

Another phase of petroleum technique which is rapidly assuming importance in development of resources of the state is the attention being devoted to utliliztaion of the large gas reserves. Nearly all prorated wells in the Smack-

Development and Production Data on Arkansas Settled Fields

FIELD	Discovery		Producing Formations		Producing Depths Feet	Proved Acres	Prod. Wells	Crude Production Data				Completion Data for 1941		Properties of Crude Oils		
	Date	Method	Name	Age				Total Production During 1941	Cumulative to Jan. 1, 1942	Estimated Remaining Reserves (Barrels)	Recovery Per Acre to Jan. 1, 1942	Oil Wells	Dry Holes	Grav. API	Sulphur Percent	Vis. at 100° F.
Champagnolle	1-27	Surf. Geol.	Tokio, Estes, Crain, Gregory	.....	2750-3300	2,100	79	329,954	14,676,407	1,000,000	6,989	1	2	..	..	..
El Dorado, S.	1-21	Surf. Geol.	Nacatoch, Ozan, Tokio	U. Cret.	2175-2900	8,000	201	417,992	47,911,649	4,000,000	5,989	4	3	32.3	1.15	52
Fouke	6-40	Refl. Seis.	Paluxy	L. Cret.	3585-3605	160	1	154,438	200,004	1,500,000	1,250	6	3	32.1	1.26	68
Garland City	12-32	Surf. Geol.	Trinity	L. Cret.	2925	300	15	80,407	1,945,139	175,000	6,484	..	..	31.7	1.26	73
Irma-Troy	11-21	Surf. Geol.	Nacatoch	U. Cret.	1200	900	74	557,297	6,886,840	1,500,000	7,652	..	..	14.1	2.70	6000+
Lewisville	4-39	Geoph.	Glen Rose, Tokio	L. Cret.	2300-3405	440	17	100,010	474,975	500,000	1,187	9	1	42.6	0.63	40
Lisbon	12-25	Surf. Geol.	Nacatoch	U. Cret.	2100	2,700	136	68,106	6,763,033	250,000	2,504	..	..	34.0	1.08	54
Nick Springs	2-40	Refl. Seis.	Sand	L. Cret.	3465-3468	400	13	307,345	488,477	1,000,000	1,221	..	..	36.5	..	..
Rodessa	6-37	Trend	Glen Rose	L. Cret.	6100	1,610	75	503,280	5,608,293	3,700,000	2,904	2	..	44	0.29	36
Schuler-Morgan	4-37	Geoph.	Morgan	L. Cret.	5650	350	12	215,735	2,271,590	3,000,000	6,490	..	..	41	0.54	41
Smackover	4-22	Surf. Geol.	Nacatoch, Graves, Travis Peak	U. & L. Cret.	2000-4900	25,760	1,605	5,281,767	388,951,588	40,000,000	11,214	12	5	20	2.25	280
Stephens	6-22	Surf. Geol.	Nacatoch, Buckrange	U. Cret.	1400-2025	2,850	198	242,981	6,544,049	1,450,000	2,296	9	1	30.6	1.60	79
Urbana	12-29	Surf. Geol.	Sand	U. & L. Cret.	2625-3550	680	52	829,722	5,379,290	2,000,000	7,911	15	10	32-18.9	2.03	2220
Total	.....	.....	.....	.....	.....	46,250	2,478	9,089,034	488,101,334	60,650,000	.....	58	25	..	..	..

Figures from Arkansas Oil & Gas Commission and other sources.

Generalized Geologic Column Sabine Uplift Area

Sequence not to scale — By H. D. Easton, Shreveport

over formation produce sour gas, which, in the past a bothersome hindrance to production and a hazard to workers, now is being utilized as fuel after purification, and the large sulphur content of gas from some fields offers source for obtaining many tons of this vital element annually. Realization of possibilities offered by use of gas revives interest in the state as a potential manufacturing center and already Arkansas is booming with newly constructed war industries.

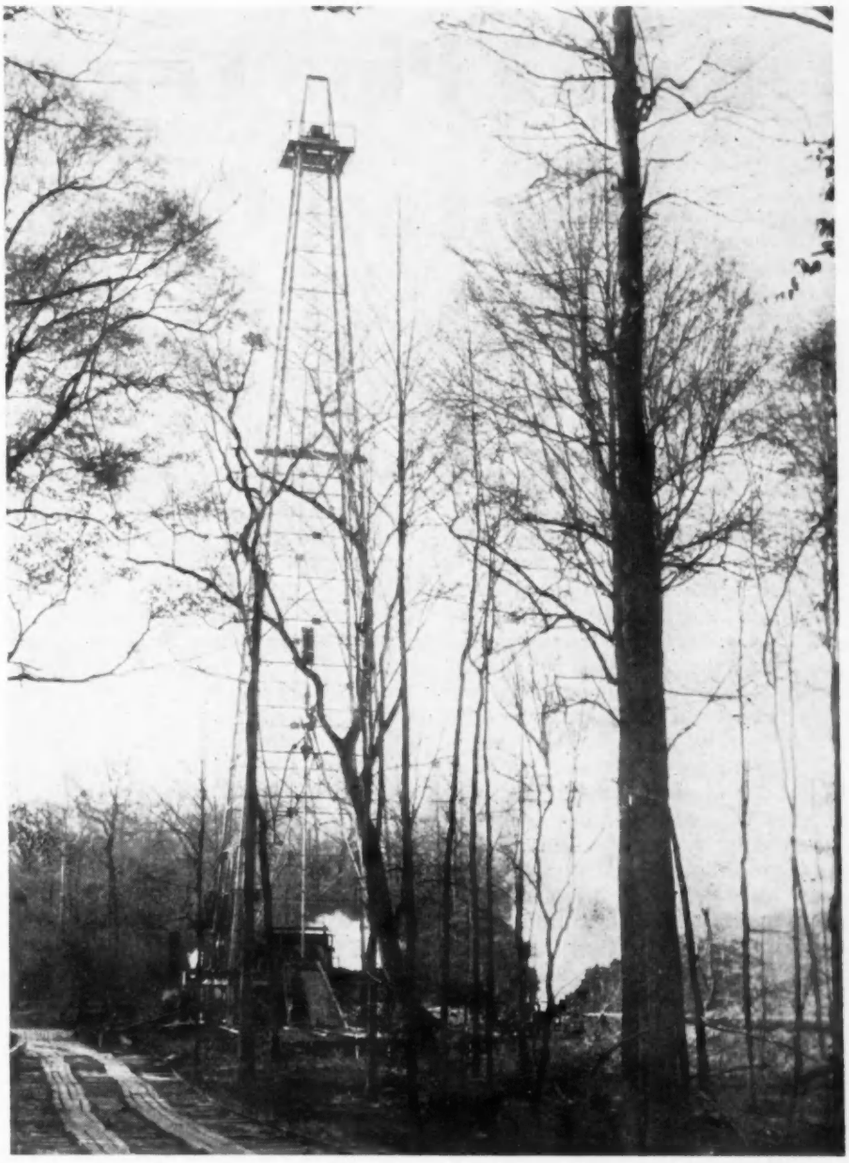
Sour Gas Conservation

One field, Magnolia, presents an area where there is no wastage of gas, as the entire output is handled through the gasoline plant located in the field, and the remaining sour gas is diverted to the desulphurization plant nearby. This plant is operated by Lion Oil Refining Company, and processes gas from Magnolia as well as from the Atlanta and Village fields, removing hydrogen sulphide to render the gas fit for domestic or industrial consumption.

A new desulphurization plant is located at the McKamie field of Lafayette County, and is operated by the McKamie Gas Cleaning Corporation, with capacity of processing approximately 30,000,000 cubic feet of gas daily. A gasoline plant is also contemplated for that section. Other desulphurization and gasoline plants are planned as a result of the success of those already in operation.

Most gas produced in the state is being utilized, with small volume burned or turned into the air for disposal. Bulletins prepared by the Oil and Gas Commission show that the bulk of all gas is being used for ultimate benefit, either in repressuring, for drilling, or in purification to prepare gas for fuel. However, gas reserves are large enough for great demands to be exacted, and with establishment of industries in the state, gas reserves may be called on to furnish millions of cubic feet daily, without damage to the reservoirs and with little detriment to ultimate recovery. Current estimates made by engineers predict that the fields are capable of producing 150,000,000 cubic feet daily.

Of particular interest is the extraction of sulphur as a by-product of the purifying process. While sour gas in other areas has been looked upon as a necessary evil, enterprising Arkansas oil companies recently realized that its natural



Steam rig, typical of many found in Arkansas, drilling a well in the East Schuler field. Terrain similar to this is also similar to that in many fields, with board roads built for accessibility.

disadvantages could be turned into assets. Comparison of sulphur content of Arkansas gas with that of sour gas in other states shows clearly the potential volume of sulphur obtainable from this source. While in some states, gases which contain over 1½ grains of hydrogen sulphide per 100 cubic feet are classed as sour, gas fields of Arkansas carrying hydrogen sulphide in quantities up to 7000 grains per 100 cubic feet. Tests and analyses of gases from various fields show the large sulphur content, and the total obtainable sulphur output now amounts to more than 145 tons daily, according to reports of the Oil and Gas Commission.

Desulphurization plants are designed to separate hydrogen sulphide in a liquid form, and it is planned that this by-product will be utilized by the chemical industry. Carbon dioxide will also be removed from the gas, and it too will find its place in industry. The manufacture of butane and propane to supply the consumer with gas beyond the ends of gas lines has become commonplace, with several gasoline and butane plants already operating, one of the finest and largest field plants operated by Shell Oil Company in the Magnolia field.

The Shell plant is a good example of the value of sound conservation. With state regulations enabling operators to foresee the approximate length of productivity of a field, the oil company, knowing with accuracy the returns possible from investments, built the gasoline plant with expectancy of operating over 30 years in the Magnolia field. As a result, good homes were constructed for workers, and the finest equipment installed throughout. This has also been the policy in completing wells in the field, with expectancy of many years of economical production encouraging installation of equipment made of only the finest material.

Sound conservation practices adopted with the first realization of their value protect Arkansas from serious effects of the war effort. Most of the fields already operated on a 40-acre spacing arrangement before federal regulations were drafted to that effect, while gas condensate fields formerly were developed on a program allowing 1 well to 160 acres. Thus, normal peace-time practice in Arkansas tends to relieve steel shortage difficulties and inability to obtain materials.

Multiple-zone completions, practiced in many states for some time, has been disapproved by the Arkansas Oil and Gas Commission in the past. However, discussion is now held regarding possibility of duel completions in the Macedonia and Dorcheat pools, both at present producing only from the Smackover lime. It is thought by operators in those pools that the Cotton Valley section will also be productive, as is the case in the Schuler field, and, that by dual completion of wells already drilled, many new wells and large increase in production will be possible with use of little additional steel or extra equipment. The equivalent of 21 new wells can be brought into production in the Dorcheat pool, while 9 wells in Macedonia and all new wells being drilled in both fields may be dually completed.

Wide spacing, unitization of small tracts into drilling units, unitization of pools, and closely supervised drilling operations have enhanced receiving the most efficient use of materials in this state. This policy enables Arkansas to maintain its reserve standing by encouraging exploration, thus aiding the war program. In all respects, the value and sense of the state conservation practice has become more obvious by present world conditions, and the flush and regulated fields, as well as the settled fields, will continue to contribute their share toward concerted war effort.

Relaid Pipe Lines Best Bet For East Coast Relief

By ELTON STERRETT, Staff Writer

BOTTLENECK of the oil industry's war participation is transportation. Production and refining capacities are equal to any estimates of demand. Breakdown of the tanker system to the East Coast has thrown a load on other facilities which, pushed to the utmost, can hope to cope with the problem only to a partial extent.

The railroads, at present handling around 600,000 barrels of petroleum products per day, are doing so only by using rolling stock, and especially motive power, at a rate which is cutting seriously into normal service life. Running repairs to locomotives are held to those absolutely required before the unit can again be sent on a run, and maintenance of the right-of-way is falling far behind the increased wear imposed on it by troop, material and petroleum products handling. Although some 15,000 additional tank cars of all capacities and ages may be rounded up to augment eastern petroleum movements, some sources are doubtful if the railroads are physically able to move them, or even to maintain present schedules indefinitely.

Relief may be secured through a number of expedients, each too little and possibly too late, and even in the aggregate falling behind the presently recognized minimum of East Coast needs.

There is the plan of extending products lines, primarily Plantation and Southeastern, by extensions to carry products closer to a wider market, the Plantation also to have a tap from its present head-of line in Louisiana to the Houston area. These plans, favorably regarded, can put finished products at Eastern tidewater or within direct water haul of Navy or Atlantic pick-up points.

Proponents of the use of the Intracoastal canal for moving any appreciable quantities of oil to Eastern points exhibit a much greater appreciation of the political significance of such proposals than they do of the various handicaps which, even under ideal conditions, would militate against such deliveries. The canal systems following —except for certain areas — the Gulf and Atlantic shorelines, would necessitate a water haul of almost 2000 miles between Houston and the Philadelphia district. At normal speed of canal traffic, assuming no lost time at locks, drawbridges and where traversing open water in bays and sounds, a towboat and four barges should be able to make the round trip in two months, or should deliver cargo 30 days after leaving Houston. This would mean that, to handle 250,000 barrels by barge daily would require a fleet of 1200 barges of 12,000-barrel capacity each, and 300 towboats powerful enough to handle these tows under varying conditions of current and wind velocities, and capable of uninterrupted 24-hour service.

To man this barge-line armada, disregarding all save men actually on the barges and tugs, 4500 men would be needed, without allowing for vacations, sickness, or even the sailors' cherished day in port.

And all this is predicated upon some sort of transportation across that portion of the Gulf of Mexico lying between the present eastern end of the Gulf Intracoastal canal at Apalachicola Bay and the point of transfer across Florida—by pipe line or canal—to next barge-navigable water in the St. John's river. Since construction of a pipe line and canal across Florida would involve much practically unattainable steel for drawbridges and would require valuable months to complete, no relief through this canal system could be expected for at least six months.

The Mississippi-Ohio inland waterway offers—on the map—a ready solution of the transportation problem. Actually, the swift current of the Mississippi, opposing the towing of loaded barges, slows a tow to a net speed of around two miles per hour, and runs the travel time between loading point and Pittsburgh-district delivery to the point where vast fleets of barges and tugs would be required to relieve the situation.

A proposal is under consideration which would lay lines—of reclaimed pipe—from East Texas to a point on the river somewhere in Arkansas, loading facilities to be set up there to permit transfer to barges for the remainder of the haul. This would lessen barge hauling distances materially.

Still further use of the Mississippi-Ohio waterway is contemplated in the plan which involves the building of the "big-inch" line or a number of smaller lines of reclaimed or salvaged lines to a point on the Mississippi near St. Louis, trans-shipment to be made to barges there until steel could be made available for completion of the line east. This last plan would avoid all bucking of the Mississippi current with loaded barges, and would transfer them to the practically canalized Ohio river.

Such concentration of barges on the Ohio would cause traffic congestion through locks and during periods of low water, but would offer barge deck space for the handling of much material out of the steel mill area on barges which otherwise would return empty for reloading at the pipe-line terminal.

Handling of crude oil through

pipe-line to the St. Louis area, thence via Ohio river to the end of navigation, and ultimate transportation across Pennsylvania by pipe line and tank cars would cut the rail haul to one fifth that now necessary for every barrel of crude handled, and would also lighten the railroad burden by the tonnage floated down the Ohio to St. Louis for transfer to rail facilities there.

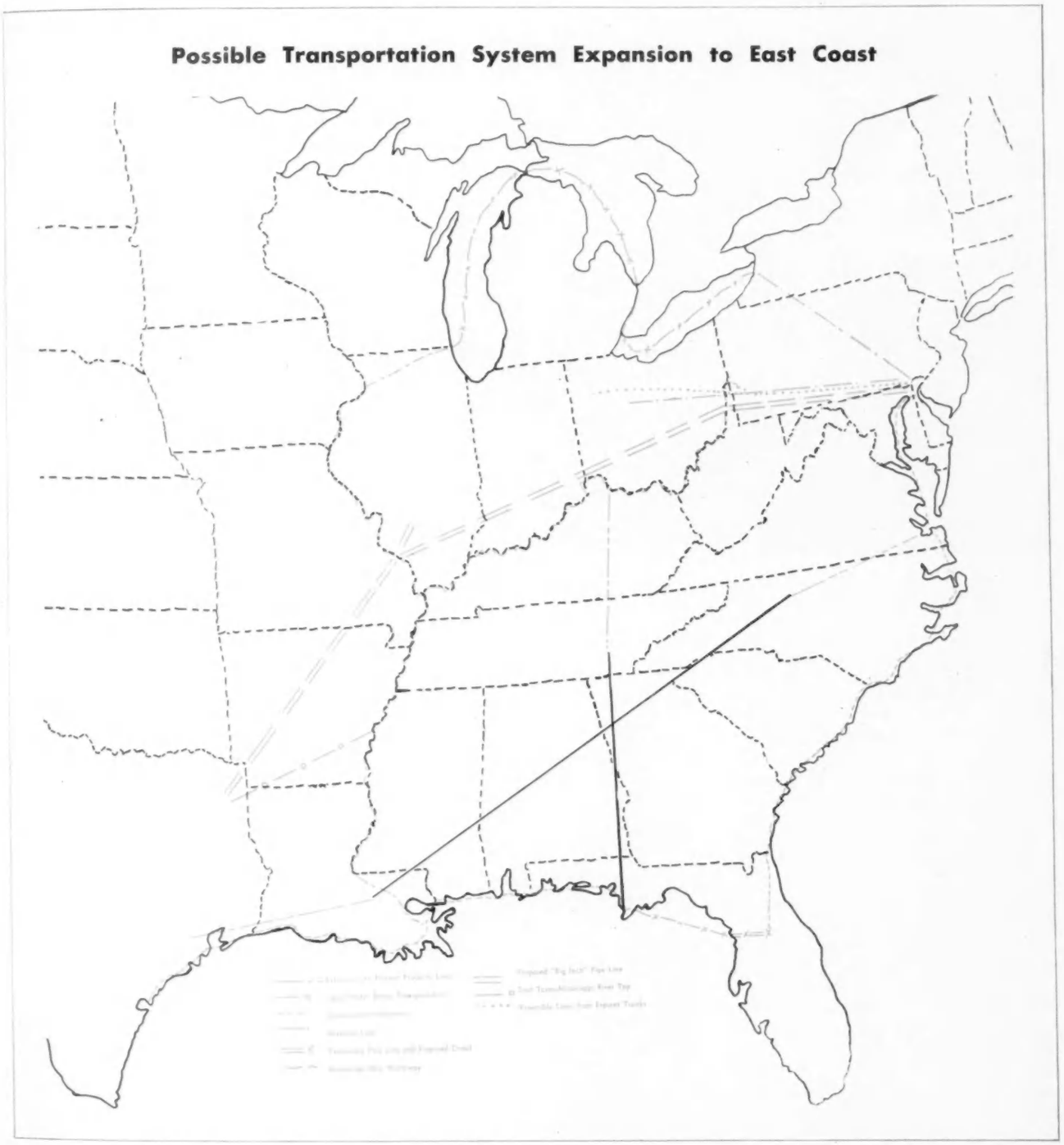
A variation of this plan, or eventual modification, calls for construction of the pipe-line link to the Mississippi first, with effort then being concentrated on building of a line from Pittsburgh to the East Coast. This section of the line, when completed, would deliver crude directly to refineries through existing facilities, and would greatly relieve traffic congestion hampering tank-car movements in the East.

Further extension of this pipe line, to a point on the Ohio near Cincinnati, and eventually a link between this terminus and the St. Louis barge area, would then give the continental system needed.

Some relief of Eastern shortages is possible during nine months of the year by means of the Mississippi system to a point on Lake Michigan, transfer through barges on the Great Lakes to a point on Lake Ontario, and pumping, through a reversed line already built, to Eastern Seaboard points. This system is extremely sensitive to weather and climatic conditions, Great Lakes navigation being suspended for from three to four months out of every year, and seri-

[*Continued on page 42*]

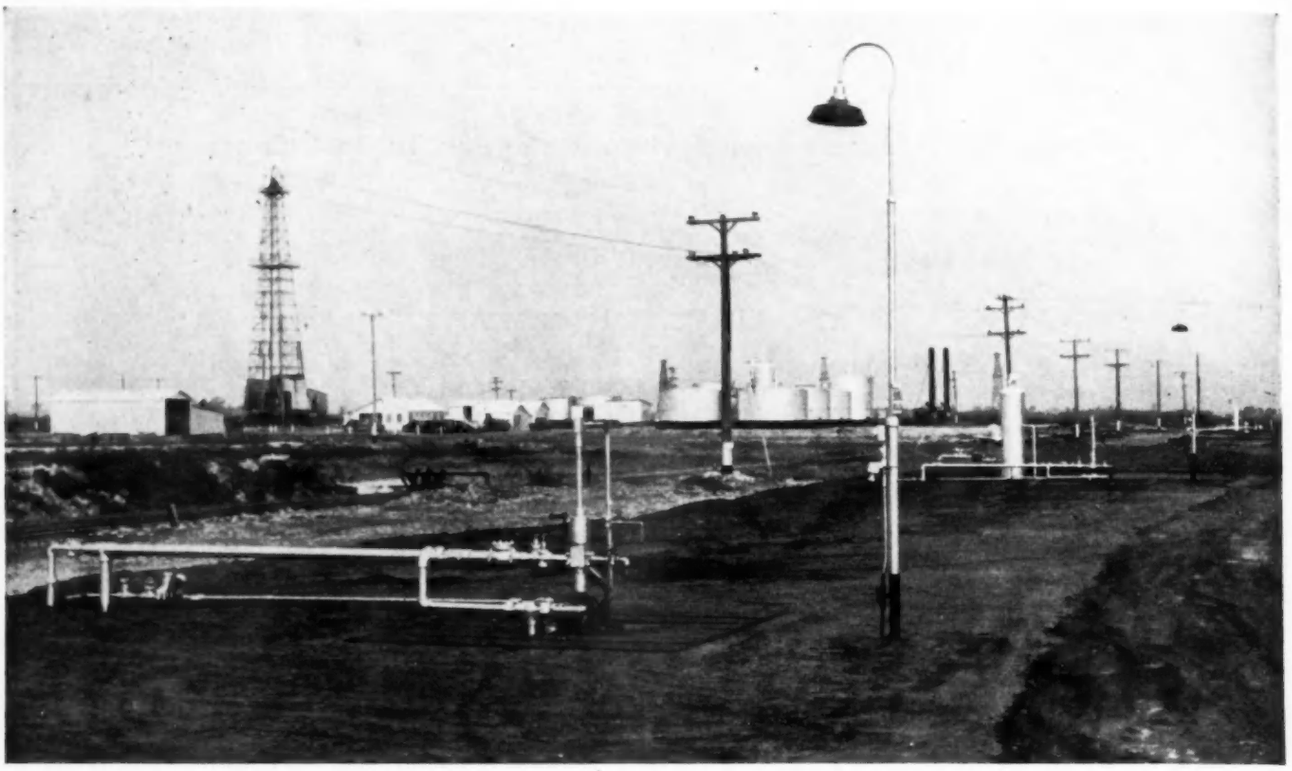
Possible Transportation System Expansion to East Coast



Lower Production Costs Through

Advance Lease Planning

By GILBERT M. WILSON, Staff Writer



The lease is arranged in north-south row pattern. The wells, both flowing and pumping, produce from any one of three zones, and to simplify records for the field men a fool-proof numbering system has been worked out. Trap and flow meter for the first two wells is visible on second well location.

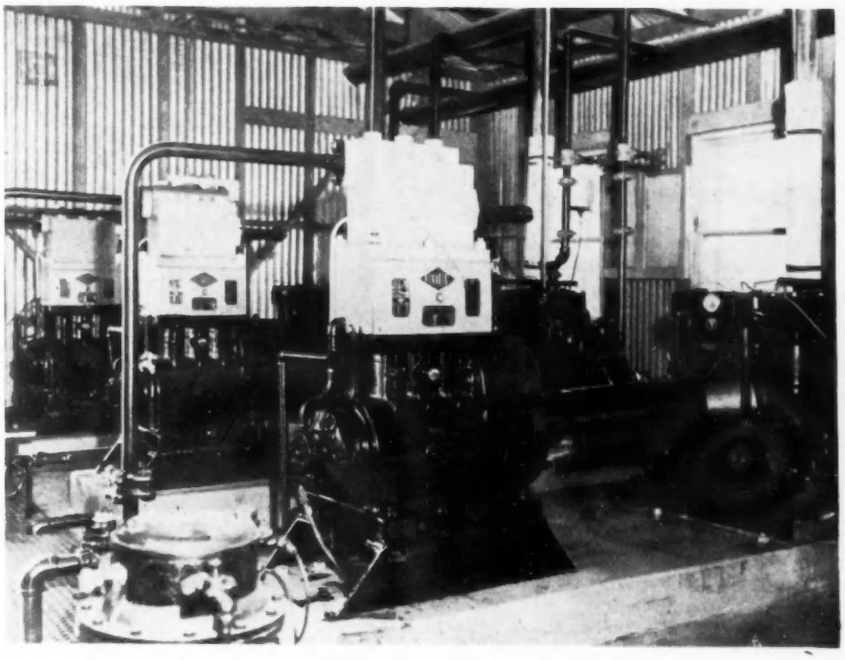
LONG-RANGE planning for lease development is paying dividends in many ways for Signal Oil & Gas Company on its Bolsa lease in the Huntington Beach field, California. Long before drilling was started, the lease was laid out in a row pattern, and the gathering-line system, following the same pattern, has greatly aided in lowering both drilling and the subsequent production installations and maintenance costs.

While the drilling program is not yet completed, and in view of restrictions being placed on drilling, might not be completed yet for several years, the production facilities have been exceptionally well planned and laid out, and centrally located with a view to efficiently handling all the wells, when they all are finally drilled, with little work or enlarging of the present facilities.

In addition to the efficient gathering system, which incidentally, does not include any small gauge tanks, the company has installed a centrally located 3-unit hydraulic-pumping plant that pumps 14 wells. Low-cost maintenance and efficient operation of this plant is due in great measure to a specially designed combination power-oil and heat-exchanger storage tank that utilizes engine-water heat to heat the oil, and at the same time, in so doing, cools the engine circulating water. The system is provided with means whereby any degree of heating or cooling is possible merely by turning of valves to divert the flow of engine water through various parts of the system.

Many of the wells in this field produce, both flowing and pumping, from any one of three zones. Shallowest sand is the Bolsa zone, ranging from 2100 to 2500 feet, depending upon the position on the structure, with gravity of the oil ranging from 18 to 27 degrees. Below that is the Upper Ashton, ranging from 3200 to 3500 feet, with 26.5 to 29.5 gravity oil. Deepest producing zone is the Lower Ashton, ranging from 4000 to 4800 feet, with oil gravity of 26.5 to 29.5. Oil accumulation is due primarily to a faulted condition.

Original plans for development of the lease called for 80 wells to be drilled, depending upon how the structure proved out, including development of the several zones wherever possible, with twin



The centrally located hydraulic pumping plant now consists of three triplex pumping units but facilities have been provided for an ultimate of seven units to accommodate additional wells reaching the end of the flowing stage. Each unit can handle six wells.

wells—two or more wells to each location, but each producing from a separate zone. The southeastern edge of the lease had been fairly well proven by offset wells, so drilling was begun in that sector. Multiple-zone completion would not be good practice in this area because the difference in pressures as between zones would react to prevent production from zones of lower pressure.

To date 36 wells have been drilled, of which 14 are being hydraulically pumped, with additional wells going on the pump as they reach the end of their flowing stage.

The development pattern was arranged as nearly as possible in north-south rows, approximately 400 to 500 feet apart, and with each row containing from 6 to 8 locations. Each location consists of from 1 to 3 single-zone wells that are spaced anywhere from 100 to 200 feet apart. No two wells in a given zone are closer than 450 feet.

A convenient well numbering system was established before lease development was begun. Each row of wells was given a base number of 10, or multiple thereof. Beginning from the east side, the first row is 10, the second 20, the third 30, etc. Each location, beginning with the one on the south end of each row, then was numbered 11, 12, 13, etc., progressing northward. Then in order to segregate the several zone wells at each location, an initial system was employed. Three zone wells in location 12, for example were numbered 12B, for the Bolsa zone, 12 for the Upper Ashton, and 12A for the Lower Ashton.

Arranging the wells in definite rows was necessary largely because the lease is located in a marshy area, and elevated roads and well locations had to be built before any development could begin.

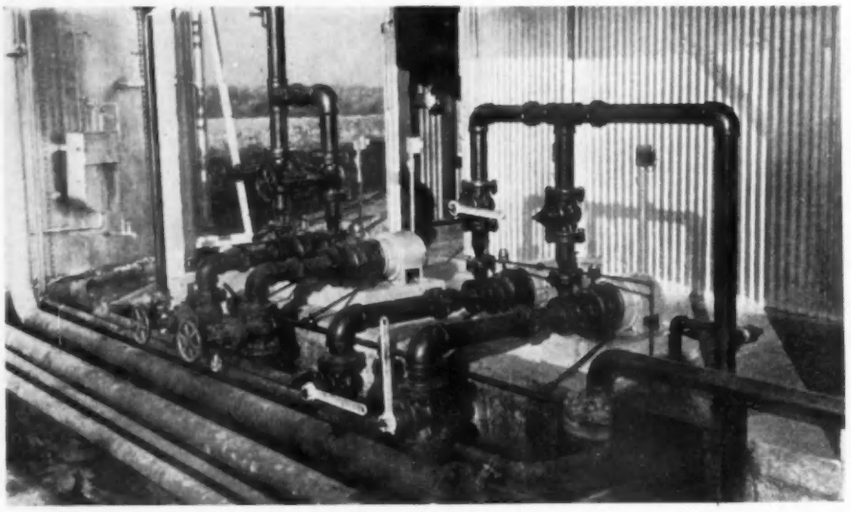
The numbering system has greatly simplified the keeping of records, and at the same time makes it virtually impossible for field men to make a mistake in finding, and recording matters pertaining to a particular well. To find well 24A, for example, the field man instantly knows that the well is the Lower Ashton zone, and is located four locations north in row 20, or the second row. The value of the number system will become more appreciated as increasing numbers of wells are completed, when it will be more difficult for the men to trust to memory alone.

No derricks were left over the wells, the servicing work being performed by one of the newer types of portable telescoping derrick masts. Each well has an individual lighting standard, well number and power outlet receptacle.

Production Metered

Production from the wells is metered in the field by meters, placed usually one to each two wells. The meter is used in conjunction with a small gas trap which removes the free gas before the oil passes through the meter. Each of the two wells running through the meter are gauged at regular alternating intervals. At certain times the meters are

A bank of lines serves each row of wells. The three large lines, originally used by the drilling department for mud, cleaning up line, and clean oil, are now used for segregating high gravity from low gravity oil, and for wells that are cutting water. Smaller lines are water, fuel and hydraulic power oil.



Mounted outside the pumping plant are two pairs of electric circulating pumps, one unit in each pair being a stand-by. One pair of pumps circulates cooling water through the radiator-less engines; the other pair takes clean power oil from the heat exchanger and carries it to intake of triplex pumps.

checked against master meters at the traps located in the large central trap setting in the approximate center of the lease.

Another interesting feature of the lease is the gathering line system. Most novel and interesting of the system, is that the lines for each row originally were designed for use during both the drilling and subsequent production operations. Running parallel to, and 50 feet back of each row of wells, are several pipe lines. Laid out in advance of the actual drilling, the lines were strung across permanent concrete supports, and consist of at least two 6-inch, and one 4- or 6-inch lines, a 3-inch water line, and a 2½-inch gas line. The larger lines were tapered from 6- to 4-inch, then to 3-inch toward the south end of each row, that end being the beginning of flow northward toward the tanks.

One of the three large lines was used for transporting drilling mud during drilling operations, from a single central mud-mixing plant to each of the several drilling wells. Another was used for a cleaning-up line, carrying oil contaminated with mud and water from newly completed wells, to the central tank battery until all the wells in that row were completed. The third large line was used for carrying clean oil from those wells that had already cleaned up.

Following completion of all the wells in a row, the three large lines were converted into use for production alone. One line, that fartherest away from the well, was used for clean oil only; the center line for low-gravity (Bolsa zone wells) clean oil; and the third, which formerly was the mud line, used for wells producing some water with the oil. A few wells in the field cut up to 10- to 15-percent water. The water and gas lines also were allowed to remain. A 1-inch take-off was run from the gas line over to each twin-well location. It supplies gas as fuel to the pulling unit when a well has to be pulled.

For the hydraulically pumped wells, a small high-pressure line was laid beside the other field lines. This line supplies power fluid under high pressure coming from the triplex pump power plant situated near the tank battery, and trap setting. Starting at the plant as a 3-inch line, it tapers down to 2½- and finally to 2-inch, as the most distant pumping wells are reached. This line is standard seamless tubing and is capable of withstanding the 2500-pound pressure to operate the hydraulic pumps.

At the north end of each row of pipe lines are block valves which make it possible to shut off or isolate any sector of the field in the event of an emergency.

Various types of primers, or solutions and paints were unsuccessfully tried in attempting to protect the lines from serious attack by the salt-laden air. It finally was discovered that 14-gravity crude oil taken directly from wells owned by the company in another coastal field, was best suited for the job. It was applied to the lines with brushes, much as any paint would be, and so far, during the past year or two since it was first used, has done an excellent job in protecting the pipe from corrosion.

Deadmen for anchoring the guy lines of the pulling unit were permanently installed along either side of each row of wells. They consist of 5-foot sections of 5-inch concrete-filled pipe set in heavy blocks of concrete, or the closely-spaced twin wells, one deadman is made to serve for either or both wells by welding a double loop to the pipe near the base of the anchor.

At the centralized trap setting and tank battery location are three 125-pound, 15,000-barrel-per-day capacity traps, and a large combination trap and oil heater for separately handling the three types of oil that come in through the three 6-inch gathering lines. Number 1 trap handles the higher gravity clean oil; Number 2 trap handles the lower gravity clean oil; and Number 3 is used primarily as a test trap, handling potentials or other tests of any particular well. Piping at the trap setting is laid out so that any well in the field may be isolated, and diverted into any trap or tank.

Wet wells are turned directly into a 3000-barrel-per-day capacity direct-gas-fired oil treater. Having an 18-pound operating pressure, this treater serves also as a low-pressure separator. Fluid in the treater is heated to 175 degrees, and water separates out, allowing the oil to go on over to the clean oil tanks. A 1500-barrel wash tank is used to treat the oil from new wells where fluid contains sand and mud.

This wash tank also is used to good advantage for reclaiming a large proportion of the oil still remaining in tank bottoms—dirty oil that often is burned or otherwise disposed of. Tank bottoms from the six 2000-barrel and one 5000-barrel tanks run through the wash tank, resulting in recovering a large proportion of the oil.

Central Hydraulic Pumping

Smooth, trouble-free functioning of the centralized hydraulic-pumping plant is a factor contributed in a large degree by a fully automatic heat exchanger system that uses hot engine water to heat the hydraulic power oil, and simultaneously causes the circulating water to become cooler by reason of its having given up its heat to the oil.

The hydraulic-pumping plant consists of three multi-cylinder gas-engine-driven triplex power units, housed in a 20- by 35-foot sheet-iron building. As more wells go on the pump, plans long since

worked out will permit the building to be expanded to accommodate four more units. Present piping, power-oil, and cooling facilities are designed for an ultimate of seven units, Each unit can handle six wells without danger of overloading.

If and when (now depending upon eventual outcome of the war and the present oil regulatory restrictions) drilling continues, and the number of pumping wells approaches 40, plans have been made for the eventual setting up of another similar pumping plant to handle newer wells in the western, as yet undeveloped, end of the property.

Each of the multi-cylinder gas engines are direct connected to the three pumping units. The engines have no radiators, the water being circulated through all the units by a single centrifugal circulating pump located outside the building near the base of the cooling tank.

Because the engines were stripped of fans, generators, and water pumps, a saving in size of each engine of approximately 100 cubic inches cylinder displacement was made possible. The engines have a displacement of 428 cubic inches, but engines of 525 cubic inches displacement would have been necessary to adequately handle the load, had the extra equipment not been taken off.

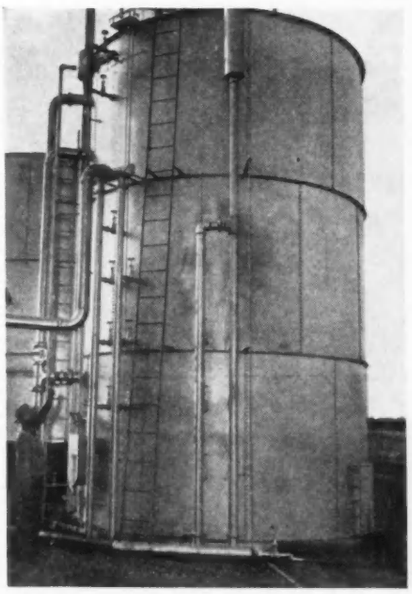
The triplex pumps operate at a constant pressure of 2500 pounds per square inch, distributing power oil to the 14 wells now on the pump. Operating pressure is held constant by a pilot-operated pressure-regulating valve which also acts as a safety or by-pass valve in case of change of demand or sudden stoppage in power-oil demand. Similarly, if for any reason the power-oil supply pressure should drop, a mercoid switch is tripped, shutting down the plant until the source of trouble is eliminated, or at least isolated from the remainder of the system.

Outside the building are two pairs of electric centrifugal circulating pumps. One pair, consisting of an operating and stand-by unit, is for circulating water through the engines to the heat-exchanger tank. Each pump, having a capacity of 3000 gallons per minute, is direct-connected to a 7½-horsepower electric motor, and supplies water at a 20-pound discharge pressure for the triplex pump engines as well as the engines driving a nearby 75 KVA electric generating plant.

The other pair of centrifugal pumps, one of them likewise being a stand-by unit, is for supplying clean power oil from the heat-exchanger unit to the triplex pumps. These centrifugal pumps are direct-connected to 5-horsepower motors, and each has a 160-gallon-per-minute capacity under a discharge pressure of around 48 pounds.

The heat exchanger unit is a tall 750-barrel tank which is automatically kept full of clean power oil. Toward the bottom of the inside of the tank are three horizontal coils of 1½-inch pipe through which water from the engines is continually circulated. Desired heat is imparted to the power oil, and the oil, in taking up the heat, cools the water in the coils. Through the use of this continuous system, temperature of the power oil is raised to approximately 120° F., and the water is held at the efficient operating temperature of between 160 and 170 degrees.

The three water coils are in parallel with each other, and can be cut out of the system individually, should temperature conditions warrant. Hot water from the engines, coming from the engine circulating pump through a 6-inch line, is forced into a vertical dual header of 3-inch pipes. At points 12 feet, 9 feet, and 6 feet respectively above the bottom on the outside of the tank, a 1½-inch outlet from each vertical header takes off and connects into the sides of the tank to the intake end of the respective coils in the interior.



Adjusting engine circulating water and power oil temperatures to the requirements brought about by varying weather conditions is easily done with this 750-barrel capacity heat exchanger. The hot engine water circulates through coils, imparting desired heat to the power oil, and simultaneously cools the engine water.

A drop of approximately 3 feet exists between the intake and outlet ends of each coil, and the outside valves and dual vertical headers of the outlet ends are taken off outside the tank a short distance away.

A constant plentiful supply of makeup water is assured the cooling system. At the top of an outside vertical 4-inch line extending up to the level of the top of the tank, is a chamber containing a float valve. A 1-inch supply line also coming up from the ground level supplies this chamber with fresh water, the float valve controlling the amount admitted.

Heated power oil coming out through a 6-inch line to enter the suction side of the centrifugal supply pump may be taken off at either a 7-foot or 18-foot level. This provides a stand-by supply in case of failure in the make-up system to the heat-exchanger tank.

Make-up oil in the tank is automatically supplied through use of a similar float-valve system consisting of a kidney valve on the outside of the tank near the top. A ¼-inch gas line runs from this valve over to the trap and tank battery setting where a pressure-regulator type control valve is connected into the clean-oil line.

A normal gas pressure of 23 pounds is carried in the ¼-inch line and regulator diaphragm. The valve is set to operate at 8 pounds and when the oil level is lowered in the tank, the float valve trips another valve which in turn causes the control valve to open, allowing make-up oil to enter the tank until the proper level again is reached. A 6-inch overflow line near the top of the tank provides an emergency outlet for power oil, should the make-up system fail.

Flexibility of water and oil temperature control is the keynote of this heat exchanger. Because any one or two of the coils may be taken out of the circuit, varying degrees of temperature of both water and oil may be obtained by simply turning a few valves. This is particularly important during seasonal changes of temperature.

During winter, when the engines run too cold, one or two coils may be cut out, thus reducing the cooling effect on the engine water. If greater heat in the power oil is desired, the discharge water can be by-passed to the suction of the header pumps.

Standard Oil Company of California's

Well-Planned Salvage Program

FOR the past 11 years Standard Oil Company of California has paid particular attention to the recovery of values represented by the salvage possibilities in materials scrapped or stored indefinitely in junk piles around company operations.

In 1931 the company's purchase and stores department began a well-planned and efficiently operated salvage program which was coordinated with all departments for reclaiming idle material and disposing of junk. How efficient and effective the program is functioning is reflected in the fact that raw materials for war supplies, since their need has become critical, has been cleared steadily through legitimate dealers in a steadily growing volume.

In the various departments of this company are many diversified activities related to producing, refining and distribution of petroleum and its products. A survey of the records indicate that approximately five percent of the equipment necessary to carry on the business is removed each year in the form of worn-out and obsolete equipment. Reclaiming this equipment prior to 1931 was carried on with more or less sporadic effort in local areas without benefit of central supervision and direction.

The plan adopted by the company in conjunction with the formation of a conservation program anticipated closely the "Erie Plan of Industrial Conservation" as the means adopted by the Government for complete utilization of second-hand critical materials, which, through its application by industry as a whole has resulted in hundreds of tons of unused equipment being moved from hiding places; old machines have been scrapped, shop yards have been cleaned up and the resulting raw materials shipped to mills to be converted into war supplies.

The stock-piles of rusting equipment are not as conspicuous as a survey of Standard properties would indicate in 1931, where tons of old cable tools and rotary drilling equipment once employed for drilling hundreds of miles of oil wells were concentrated as so much useless junk. A scrap dealer with a weather eye to business looking for stuff to be converted to merchandise could have found

Manifolds, headers and other fabricated pipe combinations bulk large for the weight of scrap material involved, and must be cut apart and brought to charging box size for speedy utilization in the steel plant. Frequently such built-up sections contain short lengths of usable material in addition to that which must be scrapped, and the welding torch is used to segregate stocks and permit frequent gauging of wall thicknesses.

After a manifold or header has been broken down and all available pipe reclaimed, fittings, flanges and preformed bends are further checked for salvage possibilities. A heavy ell, for instance, may be usable, once the stub of corroded or under-weight pipe is removed with the torch and the flange faces restored to provide proper grip on gasket material. A heavy vise speeds up reclamation work by holding materials for quicker inspection.

Unsorted scrap is broken down at the assembly yards to permit classification of materials at the time that the salvage crew checks every junked item for possible reclamation or use in lighter than original service. Scrapped materials are not deemed worth reclaiming if the expenditure of one dollar will add an equal amount to the possible service use of the material in question.

steam engine frames, compressor bed-plates, fly-wheels and extra rim weights, sheaves, coolers, heaters, cast-iron fittings from old discarded pipe lines, stacks of blown-out tires and ruined belts, piles of condemned hawsers from sea-going tankers and many other and varied types of worn-out and obsolete equipment.

In 1934, only three years after the plan was adopted and the conservation plant constructed, Director H. D. Collier—now president of Standard Oil Company of California — reported that there was "Returned to the company over $1,250,000 in reclaimed equipment, which resulted in a saving—less reconditioning cost — of $750,000 over the cost of new material." Since that year the value of reclaimed and reconditioned equipment, fittings, connections, and other material reached the one time high of $2,000,000.

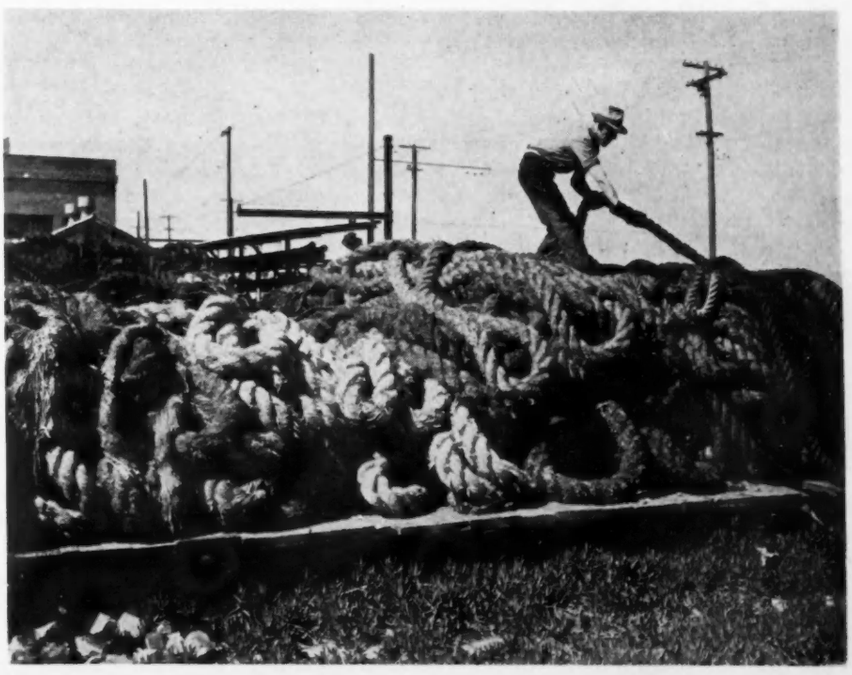
The present conservation work of the company has been adapted to the "Erie Plan" with little change to conform with all conservation work for the War Production Board, represented by the Bureau of Industrial Conservation and works under these functional headings: 1. Utilization; 2. Substitution; 3. Dismantling; 4. Reclamation; and 5. Disposal of Scrap. In other words, *repair* instead of replace; *substitute* instead of purchase; *reclaim* instead of scrap.

Under peace-time conditions, dating from the start of the conservation work by the salvage department, the company has made its reclaimed material usable at an average cost of 20 cents for each dollar of its replacement value. Under stress of war-time conditions it would be willing to spend one dollar on reclamation—if necessary—for each dollar in replacement value; and it is making all possible critical materials available to the Government without thought of economy.

More than a year ago the purchase and stores department made plans to meet the growing need then being created by America's war effort for the release of materials now being requested by the War Production Board. A conservation specialist appointed to expedite the release of all scrap and unapplied materials—using as his foundation the company's peace-time program of reclamation—maintains direct contact with department managers, plant superintendents, engineers and other key members of the company. In addition he and his department are always available for any assistance required by Government officials.

The War Production Board is calling for 32,000,000 tons of scrap steel and iron alone for 1942, and the conservation specialist's job is, first of all, that of providing more scrap for conversion. The second is to prevent purchases of new material when substitution can be accomplished effectively with reconditioned equipment. Substitution of reclaimed equipment for new releases two vital essentials—man-hours and machine-hours—sorely needed in hundreds of other industries devoted to full-scale wartime production.

With new producing and refining equipment almost impossible to obtain, the company's reclamation department now is called upon to perform a double function. It must scrape to the bottom of the material stock-pile to deliver fresh supplies to the Nation's scrap requirements, and it is required to furnish reconditioned equipment so that company operations will be up to par. Both objectives represent important contributions to the all-out war effort.



Scrapped hawsers from tankers, as well as cordage rejected as no longer usable at the drilling rig, all are dried, sorted and either used as reclaimed material for such purposes as tug pads, fenders and hose slings in the marine department, or are turned to other uses by sale to dealers for sale to such industries as those manufacturing insulating papers, and the fibre is thus utilized when cordage value is lost.

Cathodic Protection and Corrosion From Management's Viewpoint

By N. C. McGOWEN
President, United Gas Pipe Line Company

Presented before the 15th Annual Convention of the Petroleum Industry Electrical Association and the Petroleum Electric Supply Association, Shreveport, La., April 23, 1942.

MY FIRST real introduction to cathodic protection was about 10 years ago. We had a section of pipe line 80 miles in length that was costing us approximately $500 a mile per year in excess maintenance costs. Our organization, in studying this problem, talked to me about cathodic protection, and while they explained in detail what they were talking about, I was not particularly concerned with the details; it was a little over my head; but when they talked of the cost, there immediately sprang into my mind the thought that if this thing they called cathodic protection would work, it would accomplish the result of lowering our maintenance costs in what I consider to be one of the worst corrosive sections that has ever come to my attention.

The initial installations were made and soon we began to get data that showed conclusively that corrosion was being arrested. This was not accomplished easily; there were many problems to be worked out; but it was the beginning of a new line of attack on the corrosion of steel in our company.

When first discussing the work with those who were directly responsible for it, I was told that in order for it to be successful, the pipe must have a perfect enamel coating. This, of course, limited the work of cathodic protection to those lines that were enamel coated, and that may seem a peculiar statement for me to make today, but enamel coating first had its place in the building of pipe lines some time in the 20's and was one of the initial steps taken for protection against corrosion.

It has been interesting to me to watch the progress of cathodic protection work. It moved along slowly and as we began to expand the work on other parts of our system we ran into difficulties that were not within our control, such as where our lines crossed or paralleled other companies' lines, the effect of our drainage attacked their lines. In order to solve this problem it was necessary that the lines which were attacked be protected by cathodic protection, and if cooperation of the other companies could not be obtained, then we had to cease our work in those areas or be subjected to damages.

So it has been interesting to me to view from the sidelines the refinement of cathodic protection. It was not a one-company proposition; it was an all-company proposition.

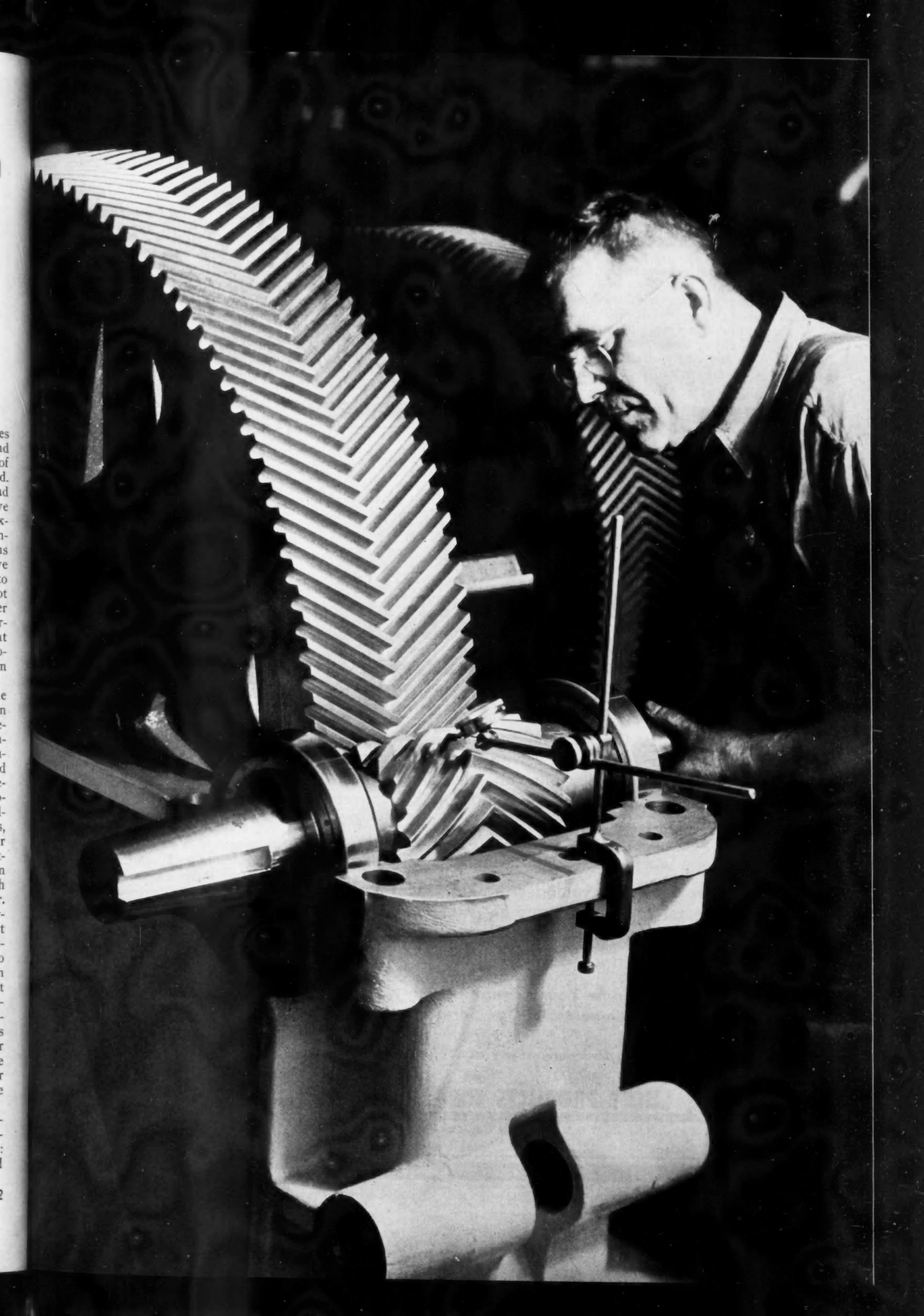
We find today that there is no longer needed a perfect enamel coated job, that lines can be protected that have no coating, lines can be protected that have imperfect coating. After the initial scheme worked, then the job of pulling it to pieces, part by part, to perfect each and every part of cathodic protection, has had the attention of the engineers of the various pipe line companies.

The work that has been done on ground beds has been a major study, and each and every detail has been pulled apart, and while today we have perfection when compared with the work that we were doing ten years ago, in my opinion the opportunities for improvement and advancement today are just as great as they were ten years ago.

This brings to my mind what has made this possible. Practically since the first day we entered the primary grades in school we have read of the sturdy pioneers, the frontiersmen, our forefathers, who settled this country and who pushed westward year by year from the thirteen original colonies to the Ohio, to the Mississippi, and then on and on, until the whole of these United States was discovered. They were strong men. They had many hardships. They had to have courage to push forward and explore the land frontier of this country. They had to meet the problems that confronted them and I have heard all my life that they had to be strong men or they could not have accomplished their pioneer work. The strong ones moved forward, the weak ones stayed at home. So when we think of pioneers we think of our forefathers in the development of this country.

It is my opinion that today the need for pioneers is greater than ever before and the frontier of research and its application to a commercial value is broader by a thousandfold than any frontiers faced by our forefathers. While management must think of the development of cathodic protection in dollars and in saving in expenditures, they must also regard it as our forefathers regarded one of the settlements that have later grown into towns and cities in their push forward on this country's frontier. Management's problem is not particularly cathodic protection; that is an incident; management's problem and management's duty is to surround itself with men who can think and with the vision to put that thought into practical application for the furtherance of industry. Furtherance of industry does not particularly mean greater profits to stockholders; furtherance of industry also means greater comfort and convenience to the people of this country.

To illustrate, the men who developed the automobile were pioneers. We can call them by name: Olds, Haynes, Henry Ford, and



numerous others. Today we think of Henry Ford and General Motors as large manufacturers, which they are. But before they could be manufacturers or before these factories were possible, pioneers had to first work out the idea, and second, make its practical application. And look what the automobile has done for us in peacetime and what the automobile factories are doing for us today, in our war effort, with their trained personnel, based upon the thought of these pioneers.

Practically any improvements and convenience and forward step that we have made in this country can be laid at the doorstep of a hardy pioneer. Take the telephone, the expansion of the oil and gas industry, with its 100-octane program, its synthetic rubber program, its refinement of lubricating oils. The development of each and every part of that industry and its ability to meet national war requirements and convert to meet the demands of our armed forces would not have been possible if they were not pioneers, and I don't define a pioneer as a man with any particularly formal education or with an idea. Lots of men have bright ideas, but they are like the weak man who stayed at home when our forefathers pushed forward; a pioneer is a man with an idea and with the courage and ability to make a practical application of that idea for the benefit of mankind.

So when I make the statement that pioneers are more necessary today then ever before and that the frontier is broader than ever before, I do so with a firm belief and without fear of contradiction.

Management feels a great source of pride in the accomplishments of those in the development of this pioneering effort in the battle against corrosion, and in this day, when the world is at war, what a great source of pride it must be to those who have developed something in peacetime, just as the automobile manufacturer, that is doing its part in this war effort. The automobile manufacturer and many other manufacturers too numerous to mention are converting from peacetime operations to making supplies for the armed forces. Those supplies take materials that are classed today as critical—critical because there are not enough to go around. One of the most critical materials is steel, and have you ever stopped to think of the number of tons of steel that can now flow into critical war materials that if it had not been for cathodic protection would be necessary to use in the replacement of corroded lines each year? And if we were unable to get that steel to keep the lines and systems in operating condition, then our industry would fail in doing its part in this war effort.

We are in a period when there is no one person or group of persons, in my opinion, who can tell what the future holds for us or where this country will be economically six months from now—12 months from now—two years from now; but what this country does know and what it is sure of is that with the pioneering expansion, with the courage, with the ability that the people in all walks of life in the United States have, we will preserve our American principles, no matter how long it takes to do the job; and I hope it will not be too long.

To me, this and many other advancements in our industry make me think of men with ability and courage which management must and will support.

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Lucey Products Corporation, always, has been a Service Institution. Our service can solve your problems quickly, efficiently and economically. Our staff, alert and aggressive, has a wide experience in the Oil Country and the Industrial Field. It knows the operating problems of both. The equipment and supplies we offer are carefully selected to meet specific needs, which is the assurance of satisfactory service.

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Drilling in United States Leveling Off at Reduced Rate

The downward trend of drilling further leveled out in April, as wells were completed at only a slightly lower daily average rate than in March; and for May, not much more, if any, additional curtailment of development is indicated, as nearly as many wells were actually drilling or rigging up on May 1, as on April 1, although some districts are due to show further contraction of field work, notably the more southerly districts of Texas, which have suffered additional losses of market.

Well completions in the United States totaled 1366 in the four weeks ended April 25, 1942, an average of 48.8 completions per day. That average compared with 50.2 (revised) for March. The April, 1942, average was 42 percent below that of 85.0 completions daily recorded for April, 1941.

In reflection of the fact that early months of this year had not yet brought full curtailment of drilling, completions for the first four months of 1942 totaled 7456, or only 16 percent less than the 8886 reported in the corresponding months last year.

Although they were exceptions, several states and districts furnished more completions this year than last year in the first four months. They included North Louisiana, Mississippi, New Mexico, West Texas, the Texas Panhandle, New York, Pennsylvania, and West Virginia.

On May 1, 1942, there were 1999 wells actually drilling in the United States, compared with 2063 on April 1. At the beginning of the year, 3453 rigs were making hole.

STATE OR DISTRICT	TOTAL RIGS IN OPERATION (Drilling, Rigs Up, Shutdown)				DETAILS OF MAY 1, 1942 FIELD ACTIVITY					
					Rigs in Operation			Prelim. Activity		
	Year Ago May 1, 1941	Month Ago April 1, 1942	Now May 1, 1942	Percent Change From Year Ago	Drilling	Rigs Up	Shutdown	Derricks	Locations	Total Operations
Alabama	6	5	5	— 16.6	1	1	3	....	....	5
Arizona	7	....	....	....	....	....	....	....	....	....
Arkansas	39	33	35	— 10.2	26	1	8	11	8	54
California	266	198	189	— 28.9	96	47	46	....	80	269
Colorado	27	22	22	— 18.5	3	3	16	....	3	25
Florida	2	2	....	....	....	....	....	....	....	....
Georgia	3	1	....	....	....	....	....	....	....	....
Illinois	320	139	188	— 41.2	136	22	30	8	25	221
Indiana	74	47	59	— 20.2	42	5	12	4	18	81
Iowa	5	1	1	— 80.0	....	....	1	....	....	1
Kansas	265	157	134	— 49.4	117	8	9	21	29	184
Kentucky	37	19	21	— 43.2	10	....	11	....	....	21
Louisiana	199	162	168	— 15.5	132	11	25	32	110	310
North Louisiana	74	66	68	— 8.1	46	7	15	25	20	113
South Louisiana	125	96	100	— 20.0	86	4	10	7	90	197
Michigan	138	133	99	— 28.2	67	11	21	21	71	191
Mississippi	45	12	12	— 73.3	6	2	4	1	3	16
Missouri	15	5	5	— 66.6	....	....	5	....	1	6
Montana	49	64	55	+ 12.2	27	7	21	1	4	60
Nebraska	35	24	23	— 34.2	7	1	15	3	2	28
New Mexico	103	124	116	+ 12.6	67	3	46	1	5	122
New York	65	127	123	+ 89.2	84	20	19	9	21	153
North Dakota	....	....	....	....	....	....	....	....	1	1
Ohio	270	108	172	— 36.2	124	18	30	11	28	211
Oklahoma	371	223	220	— 40.7	155	28	37	15	43	278
Oregon	3	....	2	— 33.3	1	....	1	....	....	2
Pennsylvania	366	296	300	— 18.0	218	34	48	18	45	363
South Dakota	....	2	1	....	....	....	1	....	....	1
Tennessee	8	4	4	— 50.0	3	1	....	....	1	5
Texas	1,313	842	668	— 49.1	517	37	114	38	371	1,077
East Texas Border Co.'s	15	5	7	— 53.3	3	2	2	1	2	10
East Texas Field	23	2	1	— 95.6	....	....	1	....	....	1
Rest of Eastern Texas	83	35	45	— 45.7	27	1	17	4	3	52
North Texas	200	105	88	— 56.0	58	5	25	4	116	208
West Central Texas	88	52	58	— 34.0	37	7	14	....	22	80
West Texas	370	273	211	— 42.9	176	8	27	11	111	333
Texas Panhandle	106	52	46	— 56.6	35	2	9	5	8	59
Gulf Coast, Upper	124	83	59	— 52.4	51	4	4	7	57	123
Gulf Coast, Lower	175	133	93	— 46.8	84	6	3	2	20	115
Southwest Texas	77	57	36	— 53.2	32	2	2	3	24	63
South Central Texas	52	45	24	— 53.8	14	....	10	1	8	33
Utah	5	3	3	— 40.0	2	....	1	....	1	4
Washington	3	....	....	....	....	....	....	....	....	....
West Virginia	191	190	193	+ 1.0	142	21	30	15	32	240
Wyoming	57	36	41	— 28.0	16	3	22	3	7	51
Total United States	4,287	2,979	2,859	— 33.3	1,999	284	576	212	909	3,980

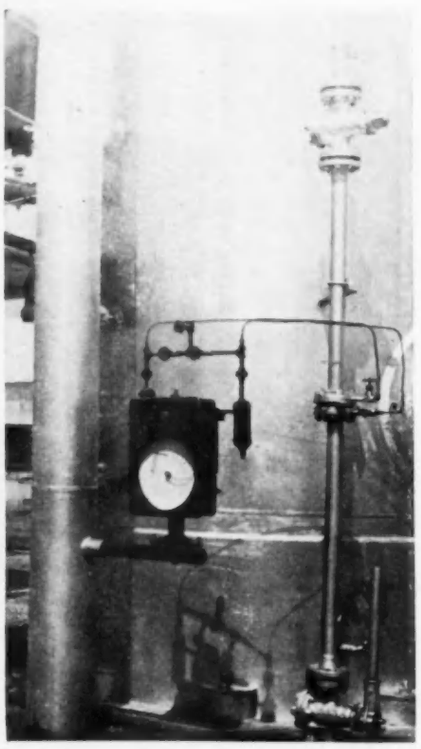
STATE OR DISTRICT	MONTHLY COMPLETIONS									CUMULATIVE COMPLETIONS: FIRST 4 MONTHS								
	Total			Details for April, 1942						Total			Details for 4 Months of 1942					
				New Wells Drilled for Oil or Gas				Old Wells Drilled Deeper	Total Footage Drilled				New Wells Drilled for Oil or Gas				Old Wells Drilled Deeper	Total Footage Drilled
	Year Ago, April, 1941[2]	Month Ago, Mar., 1942[3]	Latest Data (April, 1942)[1]	Oil	Gas	Dry	Others[4]			1941	1942	Percent Change	Oil	Gas	Dry	Others		
Alabama			1	....	....	1	....	....	4,043	....	3	....	....	....	3	....	....	4,697
Arkansas	16	19	7	3	....	4	....	....	35,253	50	44	— 12.0	29	....	14	1	....	257,590
California[5]	98	37	42	22	2	17	....	1	270,411	364	264	— 27.4	154	7	87	....	16	1,449,563
Colorado	3	1	1	....	....	1	....	....	4,819	6	4	— 33.3	1	....	3	....	....	22,520
Georgia	....	....	1	....	....	1	....	....	5,012	....	2	....	....	....	2	....	....	6,519
Illinois[6]	269	[10]84	54	27	....	23	....	4	138,230	1,012	538	— 46.8	314	4	178	10	32	1,348,767
Indiana	39	33	16	3	....	12	....	1	25,630	152	115	— 24.3	47	9	52	....	7	175,801
Kansas	165	96	85	38	1	39	1	6	258,103	621	494	— 20.4	275	21	168	3	27	1,467,522
Kentucky	19	9	6	2	....	3	....	1	6,673	79	48	— 39.2	20	....	27	....	1	57,488
Louisiana	97	99	65	45	1	18	1	....	459,013	421	346	— 17.8	220	8	115	3	....	2,225,034
North Louisiana	23	48	26	19	....	7	....	....	116,366	149	152	+ 2.0	89	4	59	....	....	567,788
South Louisiana	74	51	39	26	1	11	1	....	342,647	272	194	— 28.6	131	4	56	3	....	1,657,246
Michigan	67	43	47	26	3	18	....	....	124,715	257	217	— 15.5	125	17	74	....	1	555,310
Mississippi	8	13	9	6	....	3	....	....	45,471	46	52	+ 13.0	30	....	22	....	....	270,638
Missouri[7]	5	3	6	....	....	6	....	....	2,676	20	15	— 25.0	....	2	13	....	....	7,244
Montana	16	8	15	11	2	2	....	....	40,718	64	51	— 20.3	32	12	7	....	....	120,183
Nebraska	5	1	7	3	....	4	....	....	14,791	27	16	— 40.7	7	....	8	....	1	36,541
New Mexico	29	46	28	17	2	9	....	....	61,536	113	133	+ 17.6	88	5	36	....	4	362,483
New York	56	110	66	36	....	....	30	....	85,653	214	389	+ 81.7	213	2	....	174	....	484,999
Ohio	139	77	49	5	23	20	....	1	108,410	495	375	— 24.2	77	168	118	2	10	894,772
Oklahoma	161	125	81	28	3	39	3	8	230,347	612	527	— 13.8	240	39	189	7	52	1,534,530
Pennsylvania[8]	344	323	326	156	15	8	146	1	537,589	1,151	1,238	+ 7.5	585	95	28	521	9	2,056,402
Tennessee[9]	2	1	1	....	1	....	....	....	1,050	7	4	— 42.8	....	2	2	....	....	3,626
Texas	785	555	406	233	3	145	11	14	1,783,038	2,922	2,323	— 20.5	1,531	55	630	41	66	9,399,954
E. Tex. Border Co.'s	3	....	....	....	....	....	....	....	....	7	2	— 71.4	....	1	1	....	....	7,497
East Texas Field	40	....	2	....	....	2	....	....	7,594	219	13	— 94.0	8	....	4	1	....	43,518
Rest of Eastern Tex.	44	31	22	13	....	7	1	1	121,680	122	150	+ 22.9	97	3	43	6	1	742,460
North Texas	210	59	55	20	....	28	2	5	154,653	699	379	— 45.7	195	1	153	6	24	889,486
West Central Texas	44	36	18	7	....	10	....	1	40,351	186	136	— 26.8	56	5	68	....	7	285,318
West Texas	140	191	119	93	2	17	....	7	483,693	570	679	+ 19.1	562	7	84	....	26	2,834,554
Texas Panhandle	52	31	17	15	....	2	....	....	53,508	172	178	+ 3.4	143	25	7	....	3	532,534
Gulf Coast, Upper	48	46	33	20	....	11	2	....	242,857	219	187	— 14.6	124	3	55	5	....	1,214,567
Gulf Coast, Lower	112	90	81	47	1	27	6	....	484,359	384	354	— 7.8	234	7	89	21	3	2,083,197
Southwest Texas	76	54	51	15	....	36	....	....	163,114	265	196	— 26.0	95	2	95	2	2	651,727
South Central Texas	16	17	8	3	....	5	....	....	31,229	79	49	— 37.9	17	1	31	....	....	115,096
West Virginia	48	64	38	4	31	3	....	....	138,155	219	228	+ 4.1	37	146	28	....	17	655,245
Wyoming	10	10	9	4	1	3	....	1	28,328	34	30	— 11.7	19	2	8	....	1	107,639
Total United States	2,381	1,757	1,366	669	88	379	192	38	4,409,664	8,886	7,456	— 16.1	4,044	594	1,812	762	244	23,505,067

[1] Wells completed in 4 weeks, or 28 days, ended April 25, 1942. [2] Wells completed in 4 weeks, or 28 days, ended April 26, 1941. [3] Wells completed in 5 weeks, or 35 days, ended March 28, 1942. [4] Water input, gas injection, distillate, and salt water disposal wells. [5] California figures from American Petroleum Institute, except for April, 1942. [6] Data on new wells from Illinois Geological Survey beginning January, 1942, except for April. [7] Figures from Missouri Geological Survey. [8] Bradford and Kane-Clarendon, Pennsylvania, figures from The Producers Monthly. [9] Figures from Tennessee Division of Geology. [10] Illinois statistics for March revised to embody State Geological Survey data on new wells.

PRACTICAL OPERATING *Hints* FOR

1. METERING

Flow-Line Mounting Protects Instruments



Blind collar on adjacent pipe serves as basis for compact and sturdy pipe bracket for unit.

WHEN weather and operating conditions permit the installation of recording meters in the open, the recording head may be mounted near the orifice flange to minimize connections and concentrate the installation.

On one such set-up, where the meter was used in connection with gas processing at a diethylene glycol dehydration unit handling in excess of 100,000 mcf of gas prior to entry to a transmission line, use was made of an adjacent high-pressure gas line.

A 2-inch collar was welded blind to the line at the desired height, and a short nipple made tightly into the end of the collar.

The meter is mounted on the stub thus provided, using the customary U-bolts and clamps normally employed for such work. Levelling of the meter is then made with the usual set screws upon the mounting plate, as though the base were an independent support or post set into the ground.

Such a meter mounting clears the base and tends to avoid damage through collision with the set-up when handling materials in the yard, and also requires a minimum of pipe and other supporting material.

2. FIRE PROTECTION

Positive Door Latch Insures Fire Guards

SAFETY and fire regulations require that doors on stations handling gasoline or gaseous crudes be self-closing, so as to provide a seal and afford a maximum of protection against fire from outside.

These doors, however, are frequently propped open during overhaul periods, to permit more convenient handling of materials and to give better ventilation. One company, avoiding the unsightly and destructive pipe props usually employed for this purpose, mounts a 2-inch pipe post at the limit of door travel, mounting a two-pronged, spring-controlled latch on the post with foot pedal for opening the fastening to receive the door.

Requiring only pressure of the foot on the pedal to release the lock, the door may be quickly closed in an emergency, while making the latch of a type which requires intentional opening prevents a door being retained in the open position accidentally.

3. MAINTENANCE

Railed Platform at Controls Aids Checks

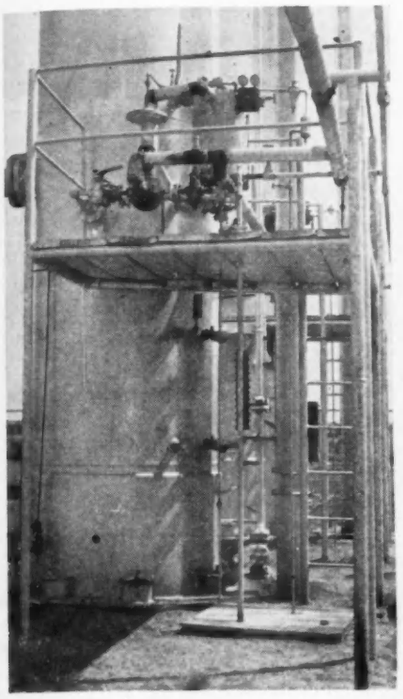
TO PROVIDE facilities for maintenance and inspection of control equipment on natural gas dehydrators on a large project supplying gas fuel to a transmission line a landing or platform was built around and beneath the controllers.

Three supporting posts are used to carry the floor of the platform above head height of men working at the base of the column, the fourth support being the column itself. At this point on the column is welded a lug with support for the two sections of floor framework contacting it. This tying-in with the column provides stability for the platform without requiring transverse bracing of the three posts carrying the other corners, thus freeing the working space beneath.

Flooring of the platform is of 2 x 12-inch planking, each piece carrying cleats nailed to the lower side at points to engage with the pipe forming the supporting frame. Thus each board is firmly held in place, yet may be removed for working on the tower when re-

Foot-operated device mounted at end of door swing must be set to retain door, and when released permits usual door-closing mechanism to function. Wedges and blocking are done away with.

quired. A railing around the platform, opening only at the point adjacent to the ladder, provides maximum safety on the platform.



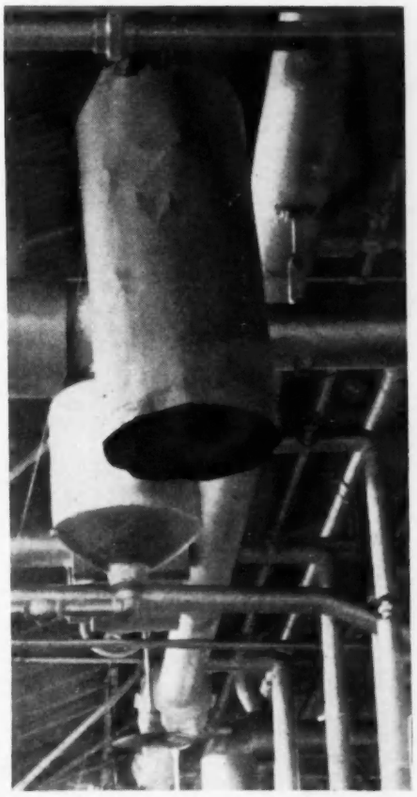
Pipe standards and bracket on tower carry overhead platform for control maintenance work.

4. BLACK OUTS

Adjustable Hood for Plant Light Fixtures

IN AN area where black-outs are expected, the ordinary lighting fixtures in an engine room, pump house or other building housing equipment operated throughout the night can be prepared for instantaneous reduction of the illuminated area by using common ordinary kraft paper. The paper must be heavy enough to prevent penetration by light, and is formed into a uniform cylinder which is reinforced with a ring of wire laced through the paper near the open end. The cylinder is large enough to slide easily over the reflector of the lighting fixture, and the upper end is crimped and tied to a light cord so that it will not slip down over the reflector when dropped in position for the black-out.

The cord runs through a small sheave above the fixture and is secured at the end to any convenient support on the side of the building, such as a ring over a small hook. When blacking out the building, the ring is detached from the hood and released which causes the cylinder to drop until stopped by the reflector. The long hood prevents light from radiating and the beam is confined to a small circle on the floor immediately beneath the open end of the black-out cylinder.



Normal light output from fixture centralized on floor by quickly actuated enclosing shield.

5. SAFETY

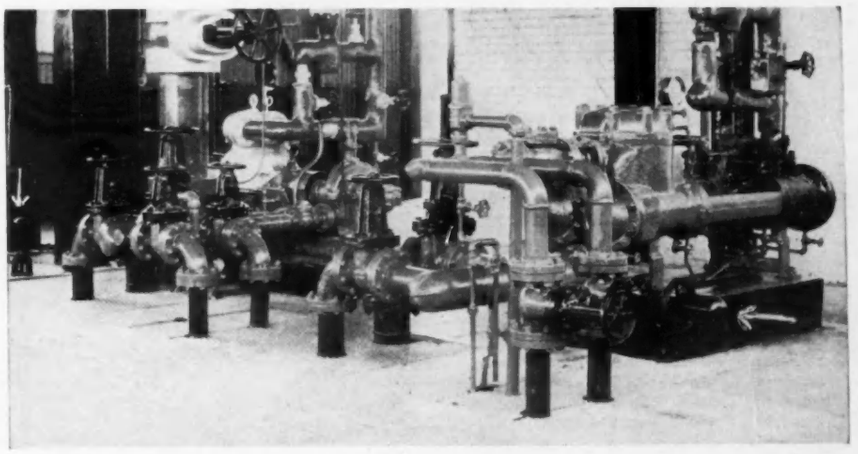
Wooden Spools Shield Rising Stems on Gates

RISING stem gates, when used near the pump-station floor and in a horizontal setting, offer a hazard which all to frequently results in barked shins or other leg injuries to personnel of the station.

Since the stem itself is of relatively small diameter, protective coloring is not effective, especially when coupled with the fact that each operating cycle of the valve tends to obliterate the color or to strip it from the threaded stem.

To guard against accidents from such a cause, one company provides heavy wood spools, bored to slip over the stem, and with the end rounded to prevent snagging clothing. The wooden spool is painted black to correspond with other pipe equipment, and to contrast most effectively with the light-colored station floor.

The bored end of the spool is cut off square, so that it may be stood upright alongside of the valve when the unit is operated, and thus be immediately available for slipping back on the stem when protection is required.

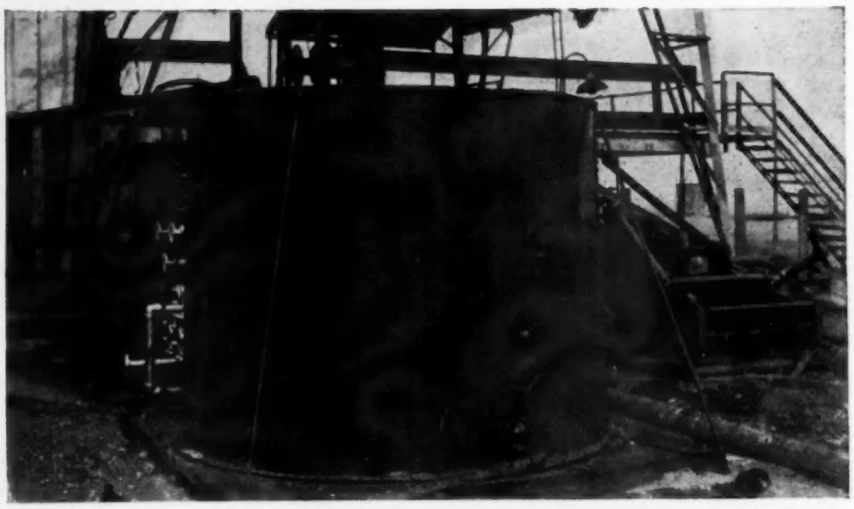


Projecting stems on gates which normally form hazards at or near floor level are covered with turned spools, painted black to be most evident against light-colored floor of station.

PRACTICAL OPERATING *Hints* FOR

1. WATER SUPPLY

Braces Remove Stress On Tank Plate Joints



Rim welded around tank, with sucker-rod braces carried to corners of tank skid, affords stiffening member which insures tank against hazards of location shifts and foundation changes.

FIELD handling of open top water tanks used on the drilling rig is facilitated by one company by reinforcing them with sucker rod material and mounting them on skid bases.

Open tanks of 50- to 100-barrel capacity are vulnerable to rough handling during moving, and if they are not protected beforehand, will soon be crumpled or shot with leaks in the seams, and become generally worthless, at least for handling water.

Around the top rim of the tank is welded a length of sucker-rod material to give strength to that part which usually is first to be caved in. After the tank is set up on the platform, lengths of the same material are welded to each of the four corners of the skid base and to the tank reinforcing rim.

Labor and material involved in building supports of this type are relatively inexpensive, and when the present scarcity of tanks and other oil field materials is realized, will more than balance expenditures.

THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.

The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."

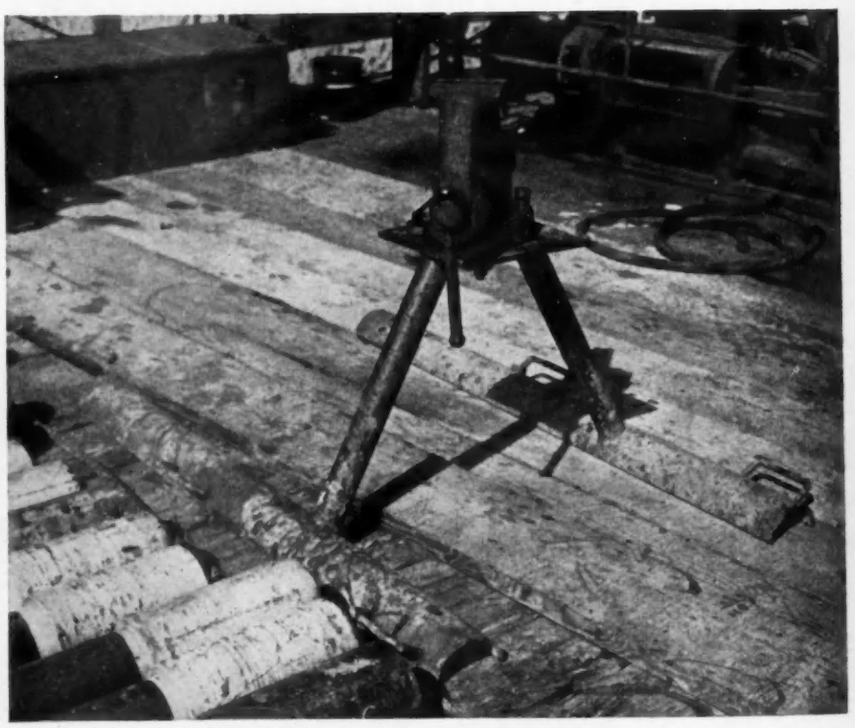
2. MAINTENANCE

Sturdy Support for Derrick Floor Set-up

CERTAIN jobs on the derrick floor often require, or at least would be greatly aided by, the use of a large vise. One operator has speeded such jobs by building up a stand upon which is mounted a heavy vise.

A 5-foot length of 6-inch casing was split lengthwise and laid upon the floor, each section being placed convex side up, and spaced about 3 feet apart. Two short legs of 2½-inch pipe were then welded to these base members, and were topped with a 15-inch square of ½-inch steel plate. The vise then was mounted upon the plate.

Two sucker rod handles were welded to the outside of each of the base members so that the assembly can be readily moved on the derrick floor. When not needed, it is set in a little-used corner, out of the way, but quickly available for any job on short notice.

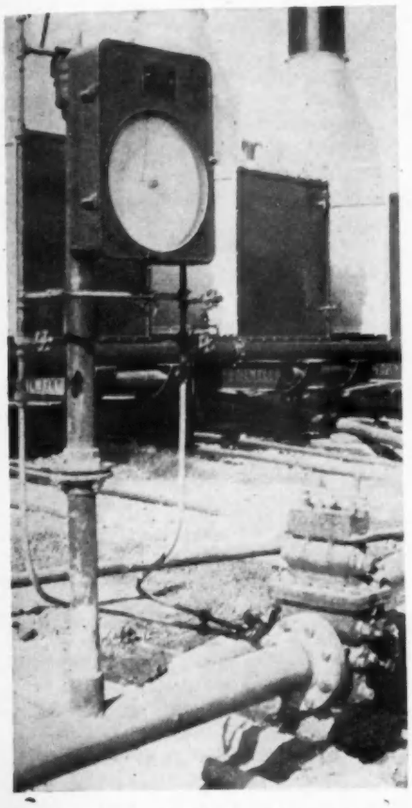


Supported on halved six-inch casing and carried on a plate at the top of heavy legs, this servicing vise is easy of access and amply braced against any heavy derrick floor maintenance work.

THE DRILLING RIG

3. FUEL

Adjustable Mounting For Gas Meter Unit



Ground union in standard welded to gas line aids in quick levelling of recording unit.

WHERE gas is purchased for drilling rig boilers on a meter basis provision of a standardized meter run in the line eliminates much delay in setting up, and insures uniform meter performance. The unit consists of a short section of line, one end of which carries the meter flange, a short distance from the end a blind collar being welded to receive a standard of 2-inch pipe.

The standard is fitted with a two-piece ground union of the four-bolt type, into which is screwed the stand supporting the recorder itself. By means of the four bolts and the ground joint, the instrument setting can be accurately levelled, even though the lower portion of the support be considerably out of line.

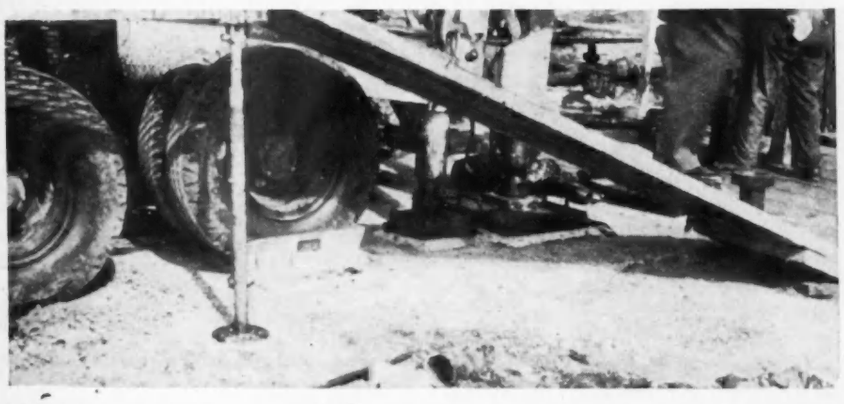
4. SAFETY

Pedestal Eliminates Platform Hazard

TO SUPPORT the outside corner of running board or walk for the operator on a drilling machine which is carried on a trailer, a stand has been devised which becomes permanent equipment.

The lower end of the stand consists of a length of 1½-inch pipe screwed into a cast flange or welded to a steel disc. At intervals through the upper portion of the pipe holes are drilled to permit the use of retaining pins.

The upper end of the support is composed of a shackle bolted to the outer edge of the running board, an eye bolt working within the shackle and being the upper end of a member made of a piece of pipe welded to the eye bolt, and small enough to work within the 1½-inch standard.



With swivel connection at end of platform bracket and adjustable pipe and pin leg to accommodate various levels, this brace adds necessary rigidity to working platform on slim-hole rig.

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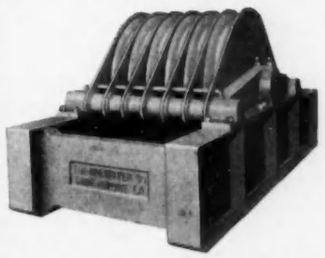

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Cole Hearing

[Continued from page 10]

the most optimistic rate which I have heard anybody predict, even with transport trucks used at the maximum on short hauls, even with all of these steps, it would still be necessary to rely on ocean shipments if the East were to be supplied with enough oil to meet normal demand."

Need Higher Prices

The coordinator was particularly emphatic regarding the need of raising prices of products sufficiently to compensate the companies for the additional transportation costs, declaring that "the willingness of the oil industry to cooperate by spending vast sums of money out of pocket for the costly overland movement has been one of the most praiseworthy examples of government-industry teamwork that I have ever witnessed."

As an example of these costs, he cited the case of companies buying heavy oil in Texas for 85 cents per barrel, spending $1.65 to ship it and selling it for $1.80 per barrel, a loss of 70 cents.

While OPA has increased products prices to compensate for the increased rail charges, he said, the companies are taking a $200,000,000-a-year loss on increased war-risk insurance charges, which OPC believes should be borne by the federal treasury as part of the overall war cost, rather than to saddle it upon the consumers in the East.

Under questioning by committee members, Ickes said he was still committed to the long-distance pipe line as the major phase of the general pipe-line program which has been under study, and which, he said, will involve the digging up and relocating of 1400 miles of second-hand line.

He admitted, however, that WPB is not sympathetic to the plan, holding the steel is more urgently needed for other purposes. "I am not quarreling with that view," he explained, "but I still insist that without oil you cannot run a war."

The same inability to secure steel is militating against plans to build barges for use on inland waterways. Wooden barges, while they can be constructed quickly, cheaply and most anywhere, are subject to leakage, constitute a dangerous fire hazard and are not allowed to tie up to docks in some cities; concrete barges also are subject to leakage. An effort is being made to have wooden barges built to move dry cargoes now hauled in steel barges and to have the latter turned over for the transportation of oil, he said.

Ickes explained that he is opposed to general rationing of gasoline and believes that even in the curtailment area rationing should not be applied in sections where there is plenty of oil, as in the case of Pittsburgh, Pa., and Bristol, Tenn. Certainly, he told Representative Sanders of Texas, there should be no rationing in that state. However, he added, if it becomes Administration policy to ration gasoline generally for the purpose of conserving rubber, that will be another matter.

Members of the committee commended Ickes and OPC for the way in which it has handled its problems, Representative Kelly of Illinois asserting the agency could well be taken as a model by other government offices.

Henderson Testifies

While the present curtailment orders have been handled satisfactorily by the filling station operators, Henderson told the subcommittee the War Production Board felt it was "unfair" to expect them to handle the 50 percent cut on which rationing is based.

Need for the rationing, he said, is based on the sorely depleted inventories of the East Coast area, which must be replenished this summer against next winter's demand for heating oils. Under the system worked out, one third of the cars will get but 12 percent of the available gasoline, but the three classes into which persons needing their machines are to be put will receive about 20 and the buses, trucks and other vehicles which are to have unlimited necessary fuel will receive about two thirds.

Each car owner will be given coupons calling for the amounts of gasoline to which the local board finds him entitled. There will be seven such coupons, one for each week through May and June.

"Within this seven-week period," the administrator said, "there is not now any prospect that the overall amount will be increased."

Henderson was questioned sharply by Representative Kelly of Illinois as to what action was being taken to protect the companies against severe financial loss, and pointed out that three price adjustments have already been made. "We have an understanding from the companies to submit to us information which would show what their experience is and on the basis of that we will make further adjustments," he said.

"Has that been submitted to date?" Kelly asked.

"To the best of my knowledge, it is not yet in," Henderson said.

Costs Interests Committee

"If the situation continues many of these companies will face bankruptcy on the transportation costs they have to bear," the congressman commented.

Representative Wolverton of New Jersey sought unsuccessfully to secure from Henderson the underlying statistics on which rationing is based. The administrator said the figures of supply and demand are provided by OPC which, he added, has done "an outstanding job" in getting information together. He refused, however, to discuss the tanker situation or other phases of military importance in open session, but commented that the railroads have done remarkably well in increasing their deliveries by tank car to 640,478 barrels a day for the week ended May 2, "with the confident expectation that there will be even a substantial increase beyond that." As various members of the subcommittee took up phases of the situation in which they were most interested, Kelly repeatedly came back to the question of costs.

Henderson said no definite decision has been made as to what method will be followed but "we are determined to hold that price ceiling.

"I cannot say that everybody is going to be reimbursed for his losses; some of the extra cost will have to be absorbed. We are not going to treat it as just simply an increase in cost and let the existing situation, whatever it happens to be from the profit-and-loss statement, stand."

Kelly pointed out that corporations having war contracts are not

taking losses but are getting good profits and criticized the singling out of corporations to which profits are to be denied.

"We are not singling out any corporations," Henderson insisted.

"We don't want to go into any situation in the oil industry of putting people out of business," Kelly warned.

"I have no intention at all of holding a price schedule that will put people out of business," the administrator assured him.

Representative Lea, also interested in costs, asked whether there has been any case on which a major industry has been asked to produce war needs at a loss, and what ways other than increasing prices were avoidable to keep the industry out of the red.

Henderson asserted there are several alternatives, including subsidies, but admitted he did not favor subsidies because of the controversies which followed them in the first World War, when more than a decade was required to clean up the claims.

To Organize Oil Protection Division

Formation of a Facility Security Division to coordinate and direct measures for the protection of oil facilities was announced by the OPC May 8. The division will work with the Office of Civilian Defense, and will be headed by W. D. Mason, since 1926 manager of refining operations for Sun Oil Company at Marcus Hook, Pennsylvania.

The definite responsibilities of Mason's organization will be to direct security work relating to all petroleum facilities; develop plans and procedures for the protection of all vital oil products; represent the OPC in all matters relating to facility protection; and advise and consult with other governmental agencies, including the War and Navy Departments, Office of Civilian Defense, Federal Bureau of Investigation and Maritime Commission, on security problems.

Seek to Reduce Tank Car Lay-over Time

In a move estimated to make available the facilities of 5000 more tank cars, Ickes May 8 issued a recommendation (No. 44) for a reduction in the lay-over time of empties at refineries and terminals. The order provides that not more than one day's supply of empty cars is to be held either at refineries for the movement of oil or products, or at water and pipe line terminals for the handling of clean oil products. Refineries, however, may hold a two days' supply of cars to be used to haul aviation gasoline or components, special naphthas, toluol and toluene.

It was explained that although the actual number of cars in service may not be increased, the order will have the effect of making some 5000 additional cars available.

Oil Men to Advise on Price Ceiling Orders

Establishment of a petroleum industry advisory committee is planned by OPA to cooperate in the handling of oil industry problems under ceiling-price orders, it was learned this week.

Members of the industry are expected to be invited to come to Washington in the near future to perfect the committee.

OPA also is considering granting subsidies to railroads hauling fuel oil to New England as a means of permitting the carriers to reduce their transportation charges and thus make possible maintenance of the price ceilings. Funds for the subsidy would be secured either from the Reconstruction Finance Corporation or the Treasury.

Subsidies to the carriers would be in line with the Price Administration's policy of ironing out situations where costs of products have overtaken retail prices by means other than advances in the latter, generally by "rolling back" producers' or wholesale prices. In some instances, however, it has been found that costs cannot be "rolled back," as in the case of oil on the East Coast.

WPB Cancels Priorities On Eastern Fuel Oil

Following complaints that some companies have been refusing to deliver fuel oil without preference ratings, WPB on May 5 cancelled all preference ratings assigned to fuel-oil purchases, and ordered that sales and deliveries of fuel oil may be made without regard to any preference rating previously issued.

It was explained that the action was taken to prevent companies entitled to the use of a preference rating under a blanket rating order from laying in large stocks of fuel oil while other consumers were unable to obtain necessary supplies.

Nation-Wide Control of Tank Cars Under ODT

Nation-wide control of tank-car movement will be inaugurated by the Office of Defense Transportation May 15, with ODT permission necessary for acceptance by the railroads of tank cars loaded with any commodity except oil moving into the Atlantic Coast area or Washington and Oregon, except on hauls exceeding 100 miles.

Under orders issued by Director Joseph B. Eastman May 5, all railroads, tank-car owners, leasing companies or lessees must stand ready to move any or all tank cars in their possession to any point designated, regardless of any contractual arrangements already in force.

More Charges Made on Cartel Agreements

Charges that Standard Oil of New Jersey and I. G. Farbenindustrie divided up world markets for paraflow and the methane stream process, with the former buying and suppressing competitive pour-point depressants and the latter suppressing use of its methane patents so as to minimize production of ammonia in this country, were laid before the Senate Patents Committee May 6 by John R. Jacobs, Jr., Special attorney in the anti-trust division of the Department of Justice.

Jacobs, testifying in an investigation of cartels and their effect upon the war program, explained that paraflow, a synthetic oil product made by the chlorination of paraffin wax, is an important pour-point depressant and told the committee "our mechanized military units will find oils treated with paraflow useful during winter military operations as it will prevent, down to a certain temperature, the freezing of the lubricating oils."

The methane steam process is used to manufacture hydrogen from natural gas which can be used in the production of synthetic ammonia for conversion into explosives or fertilizers and of gasoline

and crude oil by combining it with petroleum—the so-called hydrogenation process, one of the first methods for making aviation gasoline.

Standard and I. G., he testified, made an agreement regarding world production and sale of paraflow, control of which remained in the oil company's hands, while control of the methane steam process went to I. G.

Jacobs disclosed that a number of competitive products were bought up by Standard to protect its business in paraflow, of which nearly 1,000,000 gallons a year were sold with a profit to the company, including its share of royalty payments, of $1,390,000 in 1940 which, he said, was a net profit of more than 50 percent of sales.

Standard was not interested in the methane process where it did not enter into any product falling within the oil industry, and left with I. G. complete control over the production of hydrogen used in the production of synthetic ammonia, and since the latter is basic to the production of explosives, I. G. never entered the synthetic ammonia field in the United States but, on the contrary, carried out a policy of retarding the use of the process by American industries.

"This policy of Standard, leaving the control of this process with I. G., played right into the hands of I. G. in that I. G. was not interested in the royalty received from licensing this process, but was more interested in retarding our building up this industry," he said.

Under the consent decree recently entered, the patents have been opened to the public, royalty free, during the duration of the emergency.

"The exploitation of paraflow and the methane steam process by Standard and I. G. are good examples of how the cartel arrangement was to the advantage of both parties concerned and to the detriment of the public," Jacobs said. "Standard was interested in the exploitation of paraflow and, therefore, created a monopoly in this country and received large profits for its unlawful acts. On the other hand, Standard was not interested in the exploitation of the methane steam process for the production of synthetic ammonia and left the control of this process to the discretion of I. G. Unlike Standard, I. G. was not interested in obtaining large royalties from this process because it served I. G.'s interests more by preventing American industry from getting the use of this vital process during the war emergency."

Funds for Oil Barges Included in New Bill

Over the opposition of the Maritime Commission, the Senate on May 6 adopted an amendment to the commission's appropriation bill offered by Senators Danaher of Connecticut and Shipstead of Minnesota, earmarking $20,000,000 for the construction of tow boats and barges for the hauling of oil and other products over the inland waterways.

It was pointed out by some members of the Senate, however, that the amendment was couched in such language that construction of the facilities was not made mandatory, and there were no indications that the commission would carry out the program in the face of a memorandum to Senator McKellar of Tennessee from Chairman Emory S. Land asserting that determination of the needs for further construction of barges lays with the Office of Defense Transportation.

Supporting the Danaher - Shipstead amendment, Senator Claude E. Pepper of Florida, who is pressing for the building of a pipe line across Florida to link the inland waterways, declared that a number of agencies are considering the barge question, particularly "as to whether they should build steel barges to use on those waterways, or whether they should build wooden barges, or what other type of transportation facilities they should provide.

"They say that the decision will depend upon what method will provide the most economical use of steel," he added. "I am inclined to believe that at a very early date some recommendation on the subject will come from the administrative agencies."

House Military Group Studies OPC Efforts

Members of the House Military Affairs Committee on May 6 opened an investigation of what OPC is doing to develop and protect the nation's crude reserves.

A special subcommittee headed by Representative Faddis of Pennsylvania, meeting behind closed doors, questioned Deputy Coordinator Robert E. Allen and later issued a statement that he had furnished a list of oil fields and the known reserves in those fields, together with an estimate of the daily production which would be needed for the military motorized equipment programmed by the President.

Allen told the group that although exploratory drilling has increased considerably in the past few years, fewer fields are being discovered and the quantity of reserves has diminished because of the progressively lower quality of such fields as are found.

He urged immediate development of all crude reserves to meet the demand for war products and strongly recommended also that every effort be made to meet the eastern shortage.

Naphthalene Under Rigid Allocation

Naphthalene, a derivative of tar used in petroleum refining and other processes, was placed under rigid allocation control by the War Production Board May 6 in orders to become effective June 1.

After June 1, it was ordered, all naphthalene shipped by a producer or distributor must be delivered in accordance with schedules to be issued by the director of industry operations at the beginning of each month, except where the product is to be used for certain specified purposes, including refining.

Users of naphthalene desiring allocations of the chemical will be required to make application on Forms PD-434 and PD-435, but may apply only for amounts which, together with stocks on hand or in process on the first day of the month in which delivery is to be made, do not amount to more than a 60-day supply.

Refiners of naphthalene, except on authorization from WPB, are not to refine crude grade naphthalene (having a melting point of less than 79° C.) to refined grade (having a melting point of 79° C. or more) except on orders for the latter grade which they have been specifically authorized to fill, nor may they refine any naphthalene unless provision has been made for all deliveries of the grades ordered delivered by the director of industry operations.

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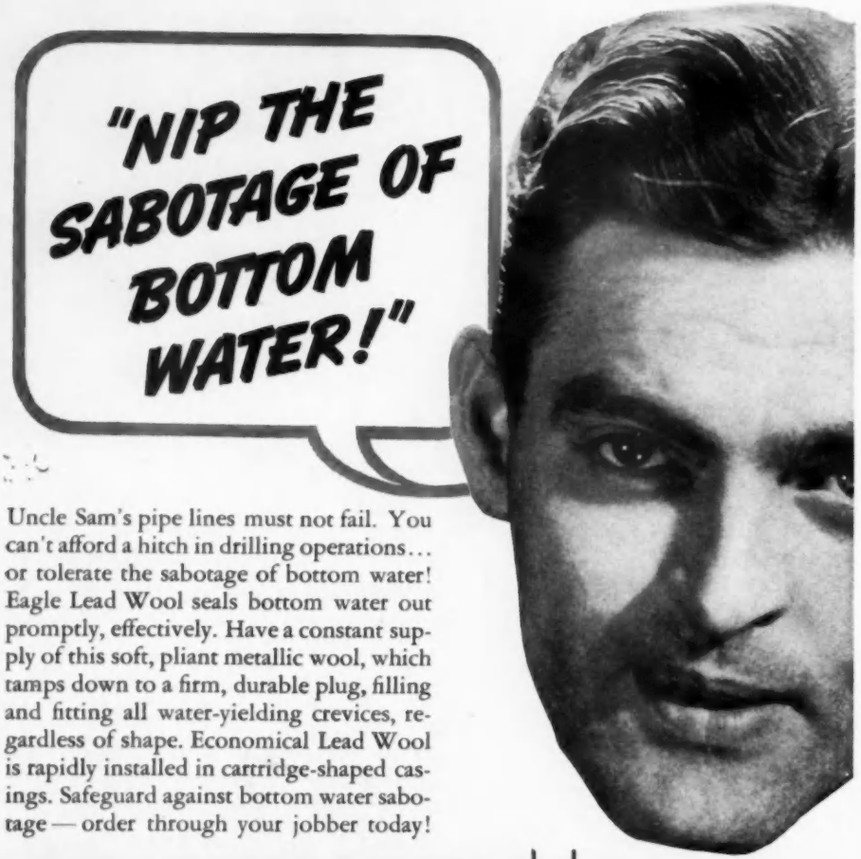

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Lines to East

[*Continued from page 21*]

ously hampered at times by severe storms which sweep the lakes and make the handling of tugs and barges with low freeboard extremely difficult and dangerous.

It is possible to step up pipe-line deliveries to the East by reversing of two lines, the Tuscarora and Susquehanna, and further utilization of the Keystone line, but the aggregate relief obtainable through complete use of the possibilities thus offered will be of little aid in meeting deficit.

If the national war effort is to function at peak effectiveness, fuel oil and crude must be delivered at Eastern points in excess of 800,000 barrels per day. If insurance of such delivery be considered imperative, ways will be found to divert steel enough to permit the building of a pipe line to assume a major portion of the spread now being temporarily borne by tank-car transportation, and until such steel can be found, the petroleum demand of the East and successful maintenance of war production in those plants dependent upon fuel oil for heat-treating forging and process operations will be attained only by employment of a group of inadequate, expensive or transitory systems, each many times as vulnerable to sabotage or breakdown as would be a pipe line.

Pending completion of some adequate means of delivering crude on the East Coast in quantities sufficient to meet war requirements, convoying of such tankers as can be spared from actual supply service to naval and military units is the only answer to a condition which threatens, through rationing, to throttle enterprise and restrict production. And convoys are notoriously slow, demand naval units which otherwise might be better used in directly prosecuting the war against the enemy, and even when closely guarded, are still vulnerable to the daring U-boat commander.

It is probably too late to build the "big-inch" line without disrupting other projects and war manufacturing, but it would prove the life line so highly desirable. Otherwise, relaying of salvaged pipe to extend existing systems and shorten barge and tank-car distances seem the best bet of meeting the largest part of the East Coast shortage.

The Week's News

Plan Gasolines Lines in Houston-Beaumont Area

Gasoline pipe lines to provide the Beaumont and Houston refining centers with a daily outlet of 60,000 barrels each are among the projects most likely to be completed by late summer. These lines would serve plants that have depended largely upon tankers for the movement of refined products prior to the war, and partially restore crude markets for South Louisiana, Texas and New Mexico fields that have been subjected to restricted output.

Preliminary work is complete for immediate extension of Plantation Pipe Line Company's line, which delivers gasoline from Baton Rouge to Greensboro, North Carolina, to Bueamont and other nearby refining centers. This project involves 190 miles of 10-inch, including 23 miles in Texas, and would be equipped with 8 booster stations. A 65-mile 8-inch extension from Beaumont to Humble Oil & Refining Company's Baytown plant, requiring two stations, is under consideration. Plantation Pipe Line Company would finance and operate the line from Baton Rouge to the Texas border, and a new corporation would be formed to build and operate the Texas portion of the system, according to present plans.

Substantial portion of the gasoline moving from Baton Rouge through the Plantation line is supplied by coastal plants that deliver to the Louisiana terminal by barges and tank cars. It is imperative that additional plants be tied into in order to assure a capacity load as refineries restrict their throughput to essential war products.

Conversion of the Pan-American Pipe Line Company's combination 10-inch and 12-inch crude carrier from the Longview sector of the East Texas field to Texas City into a gasoline line, with an extension to Cairo, Illinois, will accommodate refineries on the Houston Ship Channel and also possibly the Baytown plant. This system was placed in operation in January, 1941, and has a capacity of 50,000 barrels daily, but can be increased to 60,000 barrels daily through installation of another station on the 58-mile 10-inch unit extending south from the East Texas field to Douglas station, Nacogdoches County.

The line consists of 12-inch pipe from Drouglas station to Texas City, crossing the Houston Ship Channel at Sinco, near large plants operated by Sinclair and Shell, users of East Texas, West Texas and New Mexico crudes.

Utilization of the Pan-American system as a products line would necessitate reversal of the stream and the construction of 325 miles of 12-inch and 130 miles of 14-inch pipe in reaching Cairo. Plans call for the installation of seven main-line stations, including one on the 14-inch unit. In order to attain a capacity of 60,000 barrels daily.

Facilities will be provided at Cairo for the loading of river barges and tank cars in making final deliveries to the eastern states.

Prior to completion of its own crude carrier from the East Texas and Cayulga (low-gravity) fields, Pan-American was served by the combined facilities of Humble Pipe Line Company and Stanolind Pipe Line Company. The latter transported Cayuga crude direct from field via Mexia to Sinco, and received East Texas crude from Humble at Mexia, making deliveries of both grades to Pan-American at Sinco. This former setup is still available to Pan-American, although Stanolind is pumping about 8000 barrels daily from Fairbanks and other coastal areas to Oklahoma through the system that was formerly devoted to serving the Texas City refinery.

Thompson Urges Florida Line and Canal Construction

Real relief for the oil industry is pointed to in Congress under the Mansfield bill which provides for the immediate laying of a pipe line across the neck of Florida, thus permitting large scale barge transportation to the East Coast from Gulf States, Colonel Ernest O. Thompson, chairman of the Texas Railroad Commission, said in an address before the Eastern Regional Meeting of the Texas Academy of Science, Houston, May 8.

Under the bill's terms, the line would be built pending completion of a canal across the neck. With the line laid water transportation may be resumed by barge from Texas terminals and delivered into barges on the East Coast at Jacksonville, Florida, where the intercoastal canal is completed all the way to New Jersey.

"The way is pointed to both a temporary and permanent solution to the transport of oil by inland waterway safe from the hazard of submarine and storm," Thompson said.

He said it is interesting to note that railroads have increased the daily movement of oil to the East Coast from 140,000 barrels daily to 600,000 barrels per day and hope to finally increase this movement to 800,000 barrels daily.

Meantime, the Texas producer, faced with the transportation shortage, finds his wells shut-in by state order 18 days or more per month. He is faced with the necessity of reducing his expenses and holding on until the transportation system can again be made normal.

Referring to indebtedness against many producing properties, the commissioner said many oil men have paid off their debts and have gone into other fields for investments. "Others owe on their production. If they were careful to provide that the loan was to be paid out of the oil to be produced if, as and when allowed to be produced by the regulatory authority, then he, too, is safe because the security for the loan is there all along. The banker will just have to carry him a bit longer."

He said he had not heard of any producer actually being closed out as yet. Senator Connally's proposal to make available government loans to producers was met by a statement from one oil association, Thompson said, that they did not want any government aid or loan. "This indicated that group, at least, was not in very grave danger of losing their property as the man in dire distress is not particular where his help comes from. I submit that the oil man will survive this period as he has all other trials and that public opinion will prevent harsh foreclosures during war days," he said.

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OIL IS AMMUNITION ★ KEEP 'EM PRODUCING

Texas Group Making Plans to Move Oil

With the expressed aim of finding a permanent solution to the problem of transporting oil economically to the eastern and northern shores in sufficient quantities both for the war effort and civilian use to insure 100-percent efficiency of industry, and to find practical temporary means of moving oil immediately while waiting for permanent transportation facilities, a group of Texas operators have formed the Emergency Oil Transportation Association.

On May 6, as a result of a mass meeting May 4, a committee composed of Mike Griffith, Frank Gravis, Harry Ezzell, Louie Stieren, Louis Titus, Al Buchanan, Harry Pennington, Henderson Coquat, and Ernest O. Thompson, chairman of the Texas Railroad Commission, met to formulate plans for the organization.

It was determined that the best method of achieving a permanent solution was to support the Mansfield bill calling for construction of barge canal across the north end of Florida to connect the already existing Atlantic and Gulf of Mexico coastal canals, and to improve

the latter waterways to 125 feet in width and 12 feet in depth. A commitee to aid Mansfield in encouraging the bill was appointed as follows: Ernest O. Thompson, Austin; Maxton Nixcon, Corpus Christi; Major Hardy of Louisiana, Harry Pennington, San Antonio; and a member yet to be selected from Houston.

Another general meeting will be held Monday May 11 at the Stephen F. Austin Hotel in Austin to study the securing of immediate temporary relief.

May Allowables Result in Excessive Production

Actual production of crude oil and other petroleum liquids in the United States during the first half of May will be nearly 200,000 barrels a day in excess of the output recommended by the Office of Petroleum Coordinator. This is indicated by figures on allowables authorized in the prorated states and prospective production in unprorated Illinois and Mississippi.

The excess of output above allocations will reflect primarily the action of the Texas Railroad Commission extending April allowables over the first 15 days of May instead of further cutting the state's daily allowable about 175,000 barrels, as prescribed by OPC. The commission meanwhile is studying the effect of current production on the markets and will be guided for the latter half of May by evidence offered at a special hearing May 11. Texas has been the loser of most of the market wiped out by curtailment of consumption in the East Coast district, and the drastic curtailment of Texas production has created serious problems in that state.

Prorated states other than Texas have May schedules under which production will be made to conform with recommendations of the OPC.

Illinois continues unable to produce as much crude as the state is called upon to produce under OPC allocations. OPC allocated Illinois a quota of 329,200 barrels daily for May, but the state's actual output during the past four weeks was only 297,050 barrels per day, under an April allocation of 354,400 barrels. It is indicated, therefore, that Illinois likely will underproduce around 35,000 barrels daily or more in May.

Mississippi, on the other hand, continues to produce about twice as much crude as recommended by the OPC. The allocation for May is 48,100 barrels daily, which is a little less than that for April. But the state actually averaged 95,350 barrels daily in the four weeks ended May 2.

Texas Emergency Hearing At Austin May 11

Extending its present 10-day proration order five additional days, the Texas Railroad Commission last week called an emergency statewide hearing for Monday, May 11.

The hearing was called, Commissioners Jerry Sadler and Olin Culberson announced, because of changed transportation conditions since the hearing on April 20, and because the commission desires to see that inland refineries are supplied with sufficient crude.

The commission has requested that Oil Petroleum Coordinator Harold Ickes have a representative present.

All purchasers have been directed by the commission to have a representative present at the hearing which will be conducted in the House of Representatives at Austin, "properly authorized and prepared to testify to your stocks of crude oil as of March 1 and May 1, 1942, your needs for the last 15 days of May for crude oil from each of the fields in the State of Texas from which you are purchasing crude oil, and if you are transporting crude oil or products by pipe lines out of the State of Texas, the daily capacity of such pipe lines to transport crude oil or products out of the State of Texas, and the daily average volume of crude oil and products which you transported out of Texas by pipe line during the 30-day periods ending May 1 and May 10 respectively."

Shut down days prescribed in the 5-day extension order are May 11, 14, and 15 for fields generally, while fields producing crude for war purposes (including the manufacture of aviation gasoline, toluene, and high grade lubricants) will be closed in on May 11 and 15.

The only change in the 5-day extension order included the addition of East White Point and Rincon in Southwest Texas, to the list of fields producing oil for war purposes.

Illinois Operators Hopeful Of Space Rule Modification

Illinois oil operators, seriously concerned with a decline in field activity and new exploration due to federal drilling restrictions, believe OPC will soon amend regulations to permit a greater number of well completions in shallow pools.

Congressman Raymond McKeough of Chicago, announced on May 5 that the War Production Board's order calling for the drilling of one well to every 40 acres will be modified to relieve hardships caused by the original M-68 order.

"After several visits to the office of Petroleum Coordinator Ickes in the interest of the southern Illinois oil field operators and people I have learned today that the following conclusions have been reached and will shortly be released:

"Because of the importance of continued discovery and production of Illinois petroleum the petroleum coordinator's office proposes to recommend that the present one well to 40 acres spacing requirement of War Production Board order M-68 be amended to permit the drilling of one well to 5 acres for all sands less than 500 feet in depth; one well to 10 acres for all wells that will be more than 500 feet in depth; and less than 1500 feet each; one well to 20 acres for all wells more than 1,500 feet deep and less than 2500 feet deep; while one well to 40 acres for all wells 2500 feet deep or greater will continue to be the basis for further study of individual cases which will receive recommendations based upon their particular merit."

McKeough's statement followed a meeting of more than 200 Illinois oil operators when a program seeking modification of drilling restrictions was discussed. W. C. Kneale, of Salem, superintendent of production of the Illinois division of The Texas Company, was named chairman of a committee to prepare a request for exceptions in the Dale pool in Hamilton County. Kneale was nominated by Raymond B. Kelly, Illinois manager of The Pure Oil Company.

Samuel F. Peterson, chief petroleum engineer of the state division of oil and gas conservation, told the operators "approximately 30 pools in the state's oil basin may be included in the request for exceptions for shallow sand drilling."

Joseph Washington, representative of

Allowables for May Conform With OPC Recommendations Except in Texas

(Barrels daily of crude oil, condensate, and natural gasoline)

STATE	Recommendation of Petroleum Coordinator for April	Recommendation of Petroleum Coordinator for May	State Allowable Beginning of May	Difference May Allowable from Recommendation	Percent Difference May Allowable from Recommendation
Arkansas	74,000	74,000	72,191	— 1,809	— 2.4
California	659,800	673,800	[1]673,800	.....	.....
Kansas	253,400	259,300	259,300	.....	.....
Louisiana	313,000	298,600	[2]298,600	.....	.....
Michigan	60,200	60,500	[3]62,500	+ 2,000	+ 3.3
New Mexico	86,000	73,300	73,300	.....	.....
Oklahoma	436,900	438,500	438,500	.....	.....
Texas	1,134,000	960,000	[4]1,132,512	+172,512	+ 17.9
Total 8 Prorated States	3,007,300	2,838,000	3,010,703	+172,703	+ 6.0
Illinois	354,400	329,200	[5]297,050	— 32,150	— 9.7
Mississippi	49,800	48,100	[5]95,350	+ 47,250	+ 98.2
Total 10 Flush Production States	3,411,500	3,215,300	3,403,103	+187,803	+ 5.8
Other States	245,300	259,200	.....	.....	.....
Total United States	3,666,800	3,474,500	.....	.....	.....

[1] Distributed to fields by Conservation Committee of California Oil Producers.

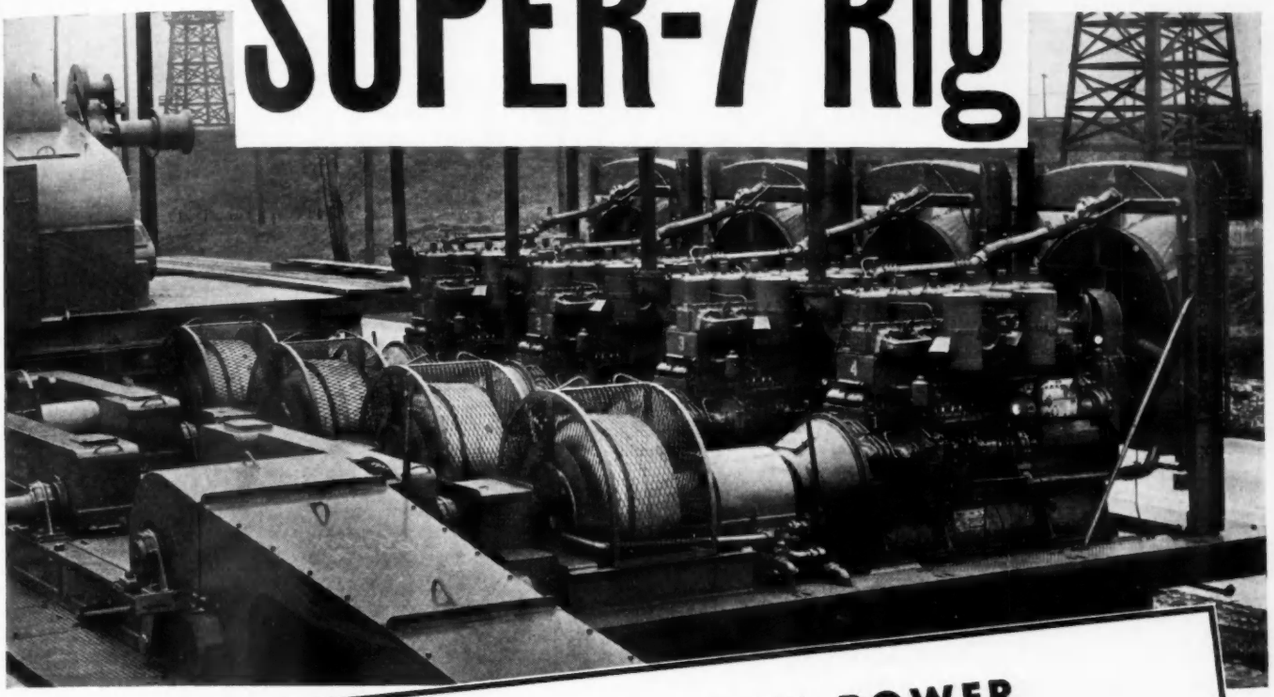
[2] State proration schedule designed to provide production recommended by OPC. Department of Conservation estimated for May a production of 19,000 barrels daily of liquid hydrocarbons other than crude, which left 279,600 barrels crude to be produced. To provide that amount of crude, it was calculated that allowables would have to be scheduled in total amount of 302,100 barrels daily, considering prospective underproduction of 12,500 barrels due to deficient wells and 10,000 due to pipe line proration. Accordingly, allowable schedule was worked out which actually prescribed crude production allowable of 301,929 barrels daily, including 225,402 for South Louisiana fields and 76,527 for North Louisiana fields, the latter figure embodying 21,790 barrels of stripper well production.

[3] No state allowable set; actual production expected to average between 62,000 and 63,000 barrels daily.

[4] This was net daily average allowable production of crude oil and other petroleum liquids as of April 1, and Texas Railroad Commission extended April allowables through first 15 days of May pending scheduled hearing May 11. Allowable as of May 1, actually is slightly above this figure for April 1, due to subsequent completions of some new wells. Under May 1-15 order, most Texas fields will be shut down May 2, 3, 4, 8, 9, 10, 11, 14, and 15, unless included among exempt fields which, because of peculiar conditions, are allowed to produce every day. Because of producing oil for war purposes, shutdown days for Panhandle, North Texas and District 7-B in West Central Texas are limited to May 3, 9, 10, 11, and 15.

[5] State not prorated: this figure daily average in four weeks ended May 2.

SUPER-7 Rig



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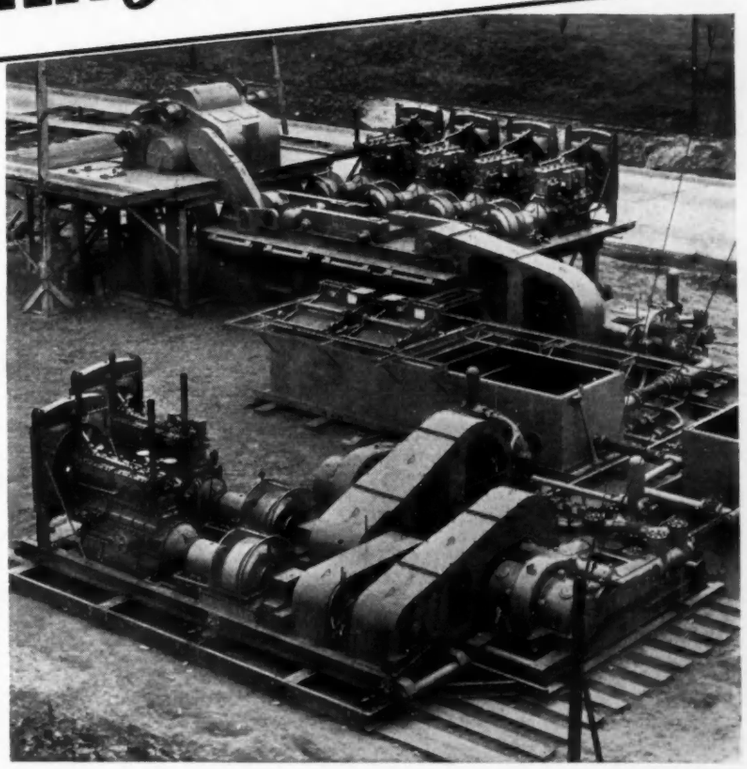
WAUKESHA

HESSELMAN *Oil* ENGINES



Destined for use in far-distant foreign oil fields, this super-modern drilling rig will push production to new peaks in the cause of the United Nations.

Built by the National Supply Company, the huge rig is owned by the Superior Oil Co.

Look at its tremendous power plant—seven Model LRHU Waukesha-Hesselman Oil Engines, each 2894 cu. in. displacement. Picture at the right shows six of them—the seventh is used as an auxiliary mud pump mixing engine.

In addition to these seven, there are four Waukesha Engines for auxiliary power—three 4-cyl. units of approximately 50 hp. each, and one 6-cyl. unit of approximately 125 hp.

Note particularly that they're all Hesselman Oil Engines—easy starting, low pressure, electric ignition engines—burning easy-to-get furnace oils, as well as high-speed diesel fuels, with the *greatest overall economy*. Get Bulletin 1116.

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the Chicago OPC office, urged the operators to "get behind a sound state conservation program and seek its enactment in the legislature in order to eliminate a great deal of confusion."

G. C. Curtis, superintendent of the state oil and gas conservation division, said drilling permits issued by the agency in April were 137 compared with 117 in March; 86 permits in January and 85 in February.

Three Speakers Arranged For Kilgore A.P.I. Meet

The program for the spring meeting of the East Texas Chapter of the American Petroleum Institute will include short talks by Jerry Sadler, Texas Railroad Commissioner; Bryan W. Payne, president of the East Texas Salt Water Disposal Company; and Tom Tyson, attorney of Corsicana. The meeting will be held in the Kilgore High School Auditorium beginning at 8:00 p.m. Tuesday, May 12. Preceding the meeting, a dinner in honor of the speakers will be held in the Kilgore Hotel beginning at 8:45 p.m.

Sadler will be direct from the special state-wide hearing on Texas oil allowables to be held at Austin Monday, and may thus be in a position to acquaint East Texas oil men with the complexities of the situation and the possibility of relief. He will also touch on the relationship of the petroleum industry to the war effort. Payne, president of Iowa Payne Oil Company and the newly organized Salt Water Disposal Company, will explain the East Texas salt-water production and disposal situation and the efforts his company will make to solve the problem. Tyson will deliver a short inspirational and patriotic address which has drawn enthusiastic comment on previous occasions.

Entertainment will be provided at both the meeting and the dinner. In announcing the meeting, R. J. Dobson, chapter chairman, stressed that the public is invited to both the dinner and the meeting.

Bureau of Mines Has New Well Evaluation Method

Development of a new method of evaluating the producing capacities of oil wells by comparing the amount of recovered petroleum with the decline of pressure in the reservoir was announced by the Bureau of Mines May 6 following an extensive study of reservoirs in different parts of the country.

Results of the investigation, it was declared by Director R. R. Sayers, have provided a "new tool" useful in analyzing the performance of individual reservoirs and in determining the efficiency of operating methods which may be of considerable value in the current war emergency, when production of oil to meet essential requirements, such as aviation gasoline, is desirable.

In a report on its investigation—"Oil Reservoir Behavior Based on Pressure-Production Data"—the bureau deals with conditions in representative fields in Texas, Oklahoma, Arkansas and New Mexico.

By plotting the cumulative decline of reservoir pressure against the cumulative amount of oil recovered, the presentation of a graphic logarithmic chart showing the relationship between them is possible, it was explained.

Ickes Warns of Hardships Before Gas Association Meeting

Due to past experience in cooperative operations, the oil and gas industries were ready for all-out wartime teamwork, and as a result have given the people of the nation its first and best lessons in adapting themselves to practices necessary under conditions existing today; but must prepare to continue its progress in cooperative efforts, Petroleum Coordinator Harold L. Ickes told the Natural Gas Section of the American Gas Association at its annual meeting in New Orleans May 6.

Referring to achievements reached through conservation and cooperative progress of the past, Ickes said "during the past decade or so, when Hitler and his 'co-hordes' were planning for war, we were planning for the conservation of our petroleum resources. We were learning how to recover oil and natural gas efficiently and with sharply decreasing waste." The industry, state authorities and federal agencies were learning how to work together. As a result, the oil and gas industry "gave the country its first and best lesson in wartime teamwork."

Without the progress made in conservation of our petroleum resources, he continued, the winning of this war would be made immeasurably more difficult.

Transportation Situation

Turning to the troublesome problem of transportation from the Gulf Coast to the heavy consuming East Coast, Ickes traced briefly the diversion of tankers to war duties and the hardships that resulted. After commending the accomplishments of the oil and gas industries for their spectacular achievements in handling these problems, he continued with the warning that "we feel it is only prudent, however, to prepare for the time when it may be necessary for us to rely entirely on land and inland water transportation to supply oil to the East Coast. I believe that the soundest national policy now dictates that we should henceforth operate on the theory that there will be no tankers available for East Coast service."

The movement of petroleum to the East Coast by tank car is now nine times as large as it was during the week before Pearl Harbor, but "we hope to make these figures even bigger, but the railroads are definitely near the limit of their oil-carrying capacity," Ickes asserted. To carry the 600,000 barrels daily by rail to the East, the Middle West and the Southwest already have contributed no less than 30,000 tank cars.

Continuing with his discussion of transportation means, the coordinator stated, "We are taking up old pipe lines and are going to relay them in such a manner as to shorten the haul to the Eastern Seaboard. Barges are being diverted from their customary runs in order to move oil up the Mississippi River and thence into the Eastern area. More barges and tugs to pull them will be built. We are making other moves which I cannot explain now, but I do want to say that there are hundreds of men in the oil industry today who are devoting their full time, their training, and experience in order to develop new ways of moving oil northwest and east. Nevertheless, all these additions, improvements, and efforts may not be enough to make 'driving as usual' possible for sometime to come, especially along the Atlantic Seaboard.

"* * * Changes of such variety and magnitude cannot be tossed into the placid pool of our national life without setting in motion a whole series of widening ripples. The oil which we cannot move to the East Coast may pile up in your Gulf Coast refineries. As tanks fill up, it becomes necessary to curtail refinery runs or to pour refined products back into the ground. As refinery runs are curtailed, it becomes necessary to restrict further the production of crude oil. As crude oil production is curtailed, the income of the crude producer is lowered. That makes for problems with the banker and the merchant and affects all phases of our economic life. * * * But all adjustments must be made with an eye fixed upon war requirements, everything must be sacrificed to the united resolve of the American people to win the war."

Upholds State's Power

He pointed out that in some quarters there seems to be an unjustified feeling that state regulatory agencies are no longer necessary on the ground the federal government has taken over control of the oil and gas business.

"I can assure you that there is no basis for such a point of view. It has been necessary to impose, for the period of the war, a certain amount of regulation of the oil and gas industries just as it has been necessary to regulate other essential industries. However, close integration of the full efforts of all parties concerned will be required if the oil and gas industries are to meet the challenge of this war."

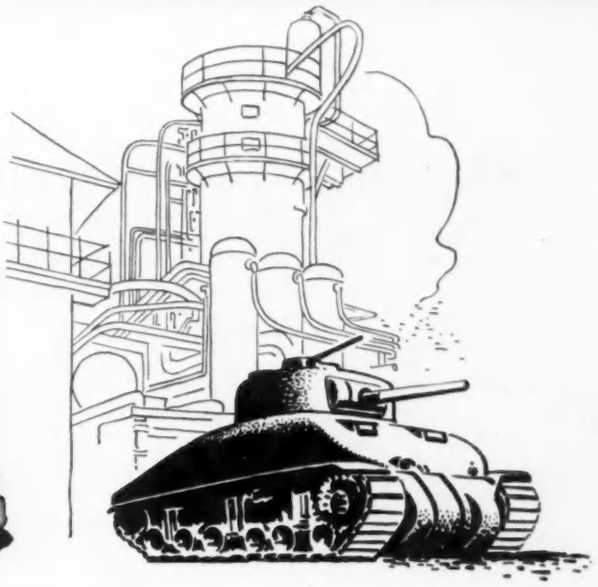
Ickes said Washington authorities had left the states to work out their problems of how best to do their part in meeting the national requirements.

"But the states must have effective laws, properly administered, for speedy and decisive results, if we are to continue to rely solely upon their voluntary cooperation. It would be highly desirable if each state adopted, where necessary, or revised and strengthened its oil and gas conservation laws. A record of successful administration during the war will demonstrate fully that a state is able to regulate and control its petroleum operations."

Importance of Gas

In wartime, he said, natural gas assumes an added importance, particularly when it is used in those industrial enterprises which are making the materials necessary for our fighting forces. To meet the new situation and to recognize the importance of natural gas and natural gasoline in the war, "we are creating a natural-gas and natural-gaso-

FOR WANT OF A NAIL!
For want of a nail a shoe was lost
For want of a shoe a horse was lost
For want of a horse a man was lost
And for want of a man a battle was lost!



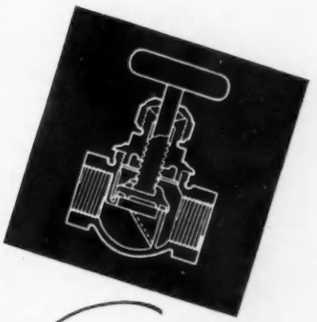
FOR WANT OF A VALVE

For want of a valve some steam was lost
For want of the steam some oil was lost
For want of the oil a tank was lost
For want of a tank an army was lost!

THAT rhyme is just another way to say that it now has become imperative that valves—particularly the valves *you* use—be maintained at the peak of efficiency.

Ordinarily that might mean replacement of many valves. But today valve metals are on the critical list. It has become un-American to replace valves that can be restored through repair or replacement of parts. And it is true Americanism to revert to old time thrift when checking the conditions of each valve and *"use it, mend it, make it do."*

As a matter of fact, Pratt & Cady by their invention of the Globe Valve with renewable seat and disc made this possible. You *can* renew your valves by first, resurfacing disc and seat—or wedge and seat—to a new seal. Then, when they are completely worn out, replace only these smaller parts. To be sure, the delivery of seats and discs is also subject to government regulations, making it good business to check the condition of your valves in plenty of time.



1865
Taken from one of the original Pratt & Cady Globe Valve patent drawings

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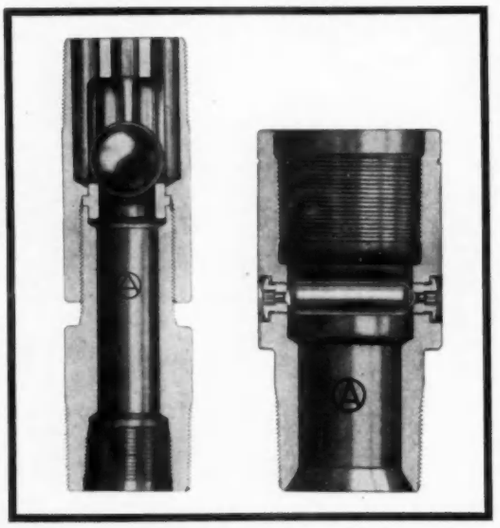

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In certain fields, once you pull a pump, production doesn't immediately come back after the pump is re-run! To again pump fluid to a production level involves a needless drain on power unit. Particularly adaptable for low fluid level wells or "wet" wells is the combination of an Axelson Tubing Bleeder and Barrel Bottom Valve.

This combination prevents dumping back fluid into the well and thereby saving many hours of time in pumping fluid back to the surface. Another important feature is that if you want to bleed tubing after pulling the pump drop the "go devil," which knocks plug assembly from bleeder and fluid will then drain from 2 ports. The oversize capacity of the Barrel Bottom Valve allows large amounts of fluid to be handled in the tubing type pumps. Threaded joints, of extra length, insure greater rigidity and freedom from accidental loosening.

If you have a particular pump problem, *write Axelson today!* They will be pleased to supply you with complete information.

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line division which will function in the same manner and on the same level with the other operating divisions in our office. The natural-gas and natural-gasoline division will occupy a position parallel with the production, refining, transportation and marketing divisions of the coordinator's office.

"At my request, representatives of the natural-gas and natural-gasoline industries have completed an illuminating survey of possibilities for the manufacture of the components of 100-octane gasoline, toluene, and synthetic rubber. Steps will be taken to assure the full utilization of the resources of these industries making these products in the production of these vital war materials."

Keynote of Meeting

Gearing of the natural-gas industry to a wartime schedule was the theme of statements and papers presented by industry leaders and technicians at the convention which opened May 4. J. French Robinson, chairman of the natural gas section and president of East Ohio Gas Company, sounded the keynote when he urged that operations be conducted so that the basic American economy be retained during and after the war.

Robinson made these observations concerning duties of natural gas operators to their customers: first, "customers look to operators for more help now than ordinarily; second, if we merely wave the flag and shout how patriotic we are, and how many bullets natural gas is contributing to the cause, we are not discharging our obligations to our customers, our country or our stockholders, and; third, in helping people get better results with natural gas by teaching them the values and practices of better gas utilization, we are helping them through the war, and we are preparing for better living after the war."

War responsibilities also were stressed by George S. Hawley, president of American Gas Association, and president of Bridgeport Gas Light Company, Bridgeport, Connecticut. He emphasized that today the nation is facing such serious conditions that in retrospect all previous experiences seem like dress rehearsals leading up to the greatest performance of all times.

Other principal speakers included Edward L. Love, vice president of Chase National Bank, who warned of the need of a program of sound financing during the war.

Other reports and papers emphasized the progress that has been made in producing, transporting and in consumption of natural gas, not only in domestic places but in vital industries and even including army camps.

Burt R. Bay, president of Northern Natural Gas Company, Omaha, Nebraska, was nominated chairman of the natural gas section of the association. Ralph E. Wertz, president of Amarillo Gas Company, Amarillo, Texas, was nominated vice chairman.

Bay has served as vice chairman and has been active in association activities in recent years. Wertz has been active in the gas business in the Texas Panhandle for a number of years, exerting considerable influence on the conservation of gas. He is in charge of his company's operations. The annual American Gas Association meeting in the fall will act upon the nominations.

Production, Runs, and Heavy Fuel Oil Stocks at New Lows

Adverse effects of the war continued to be reflected in statistics of the industry on release of figures covering the week ended May 2. Crude oil production and runs to stills both dropped further and were at new lows for the year, while stocks of urgently needed heavy fuel oil were again drawn upon and sank to a new low for recent years. Despite sharply curtailed refinery runs and current production of gasoline, there was no failure to provide as much gasoline as could be transported and used by a tire-saving and rationed nation, and the draft of 1½ million barrels from storage was only a normal withdrawal for the time of the year. A little comfort was given by the fact that contra-seasonal withdrawals from light-fuel oil stocks were stopped, as approximately 400,000 barrels went to storage, although it is taken for granted that there will be difficulty in providing enough heating oil for next winter's use.

Crude oil production averaged only 3,335,000 barrels daily in the week ended May 2, down 246,000 barrels from the previous week's rate and 172,000 barrels or 5 percent under the output in the corresponding week last year. The new production rate, lowest for this year, was under the low of 3,364,000 barrels for 1941 (set in January) and coincided with the low of 1940 (reached in November).

Refinery runs of crude oil averaged 3,441,000 barrels daily in the week ended May 2, 1942, down 65,000 barrels from the previous week and 331,000 barrels (8.7 percent) under the runs in the like week a year ago. The further curtailment of refinery throughput reflected the difficulty of supplying the East Coast, as plants in that district and the supplying districts of the Southwest together showed a decrease of 46,000 barrels in daily average runs. Changes in runs to stills in other districts were small and of little significance. At the new rate, refineries were operated at 73.5 percent of capacity. Those in the East Coast and Southwest combined were using only 65 percent of their rated capacity, in processing 1,549,000 barrels daily. That figure was less than normal requirements of the East Coast district alone.

In reflection of the reduction in runs to stills, daily average production of gasoline was off 23,000 barrels, with the East Coast and Southwest accounting for 7000 barrels of the decrease, while increases in the Middle West and the Appalachian district offset a substantial decrease in California.

Inventory of finished and unfinished gasoline was reduced 1,521,000 barrels to 101,376,000, but still was 5,553,000 barrels (5.7 percent) larger than a year previously, although the trend of demand is downward. East Coast and Southwestern stocks of gasoline were lowered 887,000 barrels, and those in the Middle West were reduced 626,000 barrels. California was the only district showing an addition to gasoline stocks.

Stocks of residual fuel oil in the United States were reduced 1,168,000 barrels in the week ended May 2 and then totaled slightly less than 80,000,000 barrels, down 12,000,000 from a year earlier. The East Coast and Southwestern district accounted for 620,000 barrels of the week's withdrawal and California for 441,000.

Crude Oil Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

STATE OR DISTRICT	[1]OPC Allocation in May	PRODUCTION IN WEEK ENDED May 2	May 9
Arkansas	74,000	73,500	73,550
California	673,800	618,300	646,100
Long Beach	.....	30,900	37,000
Midway-Sunset	.....	58,900	59,100
Kettleman Hills	.....	34,600	32,600
Wilmington	.....	99,800	98,500
Rest of State	.....	394,100	418,900
Colorado	7,900	5,250	7,560
Illinois	329,200	293,350	314,800
Salem	.....	47,600	46,850
Louden	.....	55,250	51,900
Other New Pools	.....	178,700	204,050
Old Pools	.....	11,800	12,000
Indiana	17,900	18,700	20,900
Kansas	259,300	255,300	242,950
Kentucky	12,800	12,400	12,600
Louisiana	298,600	311,800	310,700
North Louisiana	.....	77,750	81,900
South Louisiana	.....	234,050	228,800
Michigan	60,500	60,750	63,200
Mississippi	48,100	92,850	90,600
Missouri	.....	130	130
Montana	25,200	21,600	21,600
Nebraska	4,500	4,200	3,800
New Mexico	73,300	74,400	71,400
New York	14,800	13,300	13,850
Ohio	10,200	9,800	9,900
Oklahoma	438,500	404,650	398,950
Oklahoma City	.....	77,500	78,500
Seminole Area	.....	106,500	104,100
Rest of State	.....	220,650	216,350
Pennsylvania	50,500	53,050	56,850
Tennessee	.....	30	30
Texas	[2]960,000	900,950	1,078,400
Upper Gulf Coast	.....	180,950	230,200
East Texas Field	.....	146,650	226,300
Rest of Eastern Texas	.....	73,800	79,500
Lower Gulf Coast	.....	56,200	65,600
Southwest Texas	.....	41,300	45,800
South Central Texas	.....	17,800	16,500
West Texas	.....	142,050	186,500
North Texas	.....	162,150	145,400
Panhandle	.....	80,050	82,600
Utah	.....	15	15
West Virginia	17,100	10,150	9,950
Wyoming	98,300	92,800	92,830
Total United States	3,474,500	3,327,275	3,540,665

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirement for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC allocations. (Details on state allowables published in this issue of The Oil Weekly.)

[2] Net daily average allowable production of crude oil and other petroleum liquids as of April 1, was 1,132,512 barrels daily, and Texas Railroad Commission extended April allowables through first 15 days of May pending scheduled hearing May 11. Allowable as of May 1, actually is slightly above this figure for April 1, due to subsequent completions of some new wells. Under May 1—15 order, most Texas fields will be shutdown May 2, 3, 4, 8, 9, 10, 11, 14, and 15, unless included among exempt fields which, because of peculiar conditions are allowed to produce every day. Because of producing oil for war purposes, shutdown days for Panhandle, North Texas and District 7-B in West Central Texas are limited to May 3, 9, 10, 11, and 15.

Gas-oil and distillate fuel stocks had reached a 1942 low of 29,240,000 barrels April 25, but they tardily began then to increase and rose to 29,638,000 barrels by May 2, a 400,000-barrel gain for the week. However, they were then 2,383,000 barrels (7.4 percent) short of the 32,021,000 barrels reported for the beginning of May last year.

Stocks of refinable crude oil in the United States totaled 257,073,000 barrels on May 2, 1942, having decreased 490,000 barrels in the week ended on that date. The new total was 9,076,000 barrels (3.4 percent) lower than the 266,149,000 reported a year previously.

Prices Up to New Ceilings; Shortage Outside Southwest

Markets continue to reflect directly the wartime developments, which largely overshadow other factors.

Supplies are scarce and prices firm in the East Coast district under prescribed ceilings, and the strong Eastern demand for available oils extends into the Middle West and as far as the upper Mid-Continent, as shippers in those areas are called upon to help supply the East in addition to taking care of their normal markets.

On the Gulf Coast, in contrast, markets remain disrupted and inactive, without prospects for any early substantial stepping up of tanker shipments, but on the contrary, with oil shippers confronted with the threat of a further loss of markets. The new, stricter rationing ordered for the East Coast appeared to substantiate forecasts that within a short time very few, if any, tankers would be left in the Gulf Coast-Atlantic seaboard service, because needed directly in the war.

Disquieting in all districts, furthermore, was the threat out of Washington that the government might find it necessary to take over privately owned motor vehicles for military use, particularly for the use of tires on those cars.

In the East Coast district, prices of fuel oils and gasoline were up generally to the recently raised ceilings, with Bunker C and No. 6 fuel oil in New York 25 cents a barrel higher at $1.80, while No. 5 fuel oil also was up 25 cents at $2.10 to $2.25. No. 2 and No. 3 fuel oils in tank cars at New York were up 2/10 cent at 5.8 cents a gallon. Diesel oil and gas oil likewise were up 2/10 cent a gallon, as allowed, at 5.9 cents a gallon. All grades of gasoline in New York were up 4/10 cent a gallon, as authorized by OPA, the new quotations having been 9.2 cents a gallon for 68-70 and 72-74 octane and 9.7 to 10.2 cents for minimum 80 octane '39 research.

In the Middle West, refiners were several days to a week behind with shipments, as they reported scarcity of materials and some continued difficulty in obtaining enough tank cars, although the transportation problem had become less acute. Range oil and No. 1 fuel oil were particularly scarce, and there was heavy demand for all grades of gasoline.

Mid-Continent refiners also were as much as a week behind on shipments, although moving out all the oils possi-

ble with the tank cars at their disposal. Buying from the East continued an important factor, although inadequacy of transportation made it necessary to turn down prospective business.

Crude Output Above Week Ago and Quota

United States crude oil production averaged 3,540,665 barrels daily in the week ended May 9. The output was 213,390 barrels above the daily rate of the previous week and exceeded by 66,165 barrels the production rate recommended for May by the petroleum coordinator.

Texas largely accounted for the sharp increase of the week, as output there increased 177,450 barrels, from 900,950 daily in the previous week to 1,078,400.

California increased materially, from 618,300 to 646,100 barrels daily. Illinois rose from 293,350 to 314,800 barrels, and Michigan from 60,750 to 63,200.

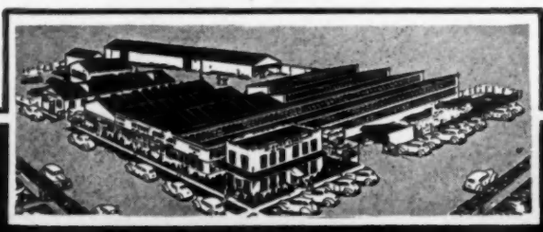
Kansas declined from 255,300 to 242,950 barrels a day; Oklahoma from 404,650 to 398,950; Louisiana from 311,800 to 310,700; Mississippi from 92,850 to 90,600, and New Mexico from 74,400 to 71,400.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

ITEM	Crude Oil Prod.		Runs to Stills		Crude Stocks		Gasoline Stocks		Gas Oil & Distillate Stocks		Residual Fuel Oil Stocks	
	Bbls. Day (Add 000)	Week Ended	Bbls. Day (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended	Bbls. (Add 000)	Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-22	[4]4,120	10-18	266,187	3-29	99,727	3-29	[5]54,983	11-15	102,448	1- 4
1942	[4]4,337	2- 7	3,961	1- 3	263,208	3-28	[1]107,229	3-14	49,357	1- 3	95,857	1- 3
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-21	71,152	10- 7	20,722	4-15	105,397	4- 8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	80,870	10- 4	28,381	4-12	92,635	7- 5
1942	3,335	5- 2	3,441	5- 2	244,364	1-10	92,987	1- 3	29,240	4-25	79,939	5- 2
Trends in 1942 (Week Ended):												
Jan. 3	4,038	.....	3,961	.....	244,440	.....	92,987	.....	49,357	.....	95,857	.....
Jan. 31	3,871	.....	3,848	.....	250,740	.....	97,810	.....	40,674	.....	91,189	.....
Feb. 28	4,016	.....	3,675	.....	259,373	.....	105,635	.....	34,547	.....	88,285	.....
Mar. 28	3,820	.....	3,667	.....	263,208	.....	105,624	.....	31,756	.....	83,045	.....
April 4	3,418	.....	3,515	.....	261,768	.....	105,149	.....	31,231	.....	82,455	.....
April 11	3,543	.....	3,518	.....	258,442	.....	104,580	.....	30,602	.....	82,526	.....
April 18	3,545	.....	3,548	.....	257,563	.....	103,502	.....	29,929	.....	82,577	.....
April 25	3,581	.....	3,506	.....	257,073	.....	102,897	.....	29,240	.....	81,107	.....
May 2, 1942	3,335	.....	3,441	.....	.....	.....	101,376	.....	29,638	.....	79,939	.....
May 2, 1941	3,507	.....	3,772	.....	[4]266,149	.....	95,823	.....	32,021	.....	91,889	.....
Change:												
In week	—246	.....	—65	.....	—490	.....	—1,521	.....	+398	.....	—1,168	.....
In year	—172	.....	—331	.....	—9,076	.....	+5,553	.....	—2,383	.....	—11,950	.....
In year	—4.9%	.....	—8.7%	.....	—3.4%	.....	+5.7%	.....	—7.4%	.....	—13.0%	.....

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Stocks, April 26, 1941.



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May Demand Estimated At 3,729,000 Barrels Daily

National demand for domestic crude this month will average 3,729,000 barrels a day, 187,000 barrels less than actual demand in the same month last year but 254,500 barrels a day more than the OPC recommendation for all petroleum liquids, the Bureau of Mines announced May 8.

Total demand for motor fuel for the month was placed at 56,700,000 barrels, 4,200,000 barrels, or seven percent less than the actual demand in May of last year. This estimated decrease reflects restricted use of motor vehicles to conserve tires and also anticipates the effect of restricted deliveries of gasoline but not the 50 percent rationing of the East Coast, to distributors in the East and Pacific Northwest.

The Bureau found that daily average crude production during the five weeks ended April 4 was 3,676,000 barrels and total runs to stills 3,580,000 barrels, stocks of domestic crude increasing an average of 102,000 barrels a day, and indicating a demand for domestic crude of 3,574,000 barrels. Although demand for all oils increased over last year during the first quarter of 1942, the trend is leveling out now and is expected to be downward from now on, the Bureau found.

Tropical Has Permit for Fuel Oil Line in Colombia

Tropical Oil Company has obtained from the Colombian government a permit to build a fuel-oil pipe line from the company's storage station at Cano Arriba to the maritime terminal at Barranquilla. Operations on the company's de Mares concession have been handicapped by uncertainty growing out of the government's suit to terminate the concession in July, 1946, but a few rigs have been operating each month since filing of the suit last year. The government filed its brief in the supreme court last week. Termination of the case is expected next fall.

Shell Oil Company of Colombia is reported as dismantling a recently erected rig on a privately owned tract near Hondo in the Magdalena valley following institution of a government suit to contest a ruling of the supreme court that the property is privately owned with respect to subsoil rights. The company had advised the Oil Ministry of intention to drill and had presented evidence showing private ownership. Such ownership was subsequently recognized by the supreme court but the government decided to contest the decision.

Japs Stopped Promising East Indies Exploration

A promising exploratory program in the Netherlands East Indies was terminated by the Japanese seizure of the islands, according to a brief report by Standard Oil Company of California. Nederlandsche Pacific Petroleum Maatschappij, in which the company has a 50-percent interest, drilled a number of tests in Sumatra with encouraging results during 1941 and was in the midst of a program of geological and geophysical exploration. In Netherlands New Guinea, Nederlandsche, Nieuw Guinee Petroleum Maatschappij, also drilled some wildcats with good results.

U. S. Field Operations

Illinois

Madison County Wildcat Has Interesting Showing

Interest in west side of basin heightened by wildcat in Madison County which found show of Trenton oil; casing set at two Franklin County wildcats; Gallatin County pool opener swabs 80 bbls a day from Cypress.

Madison County: M. B. Bryant's Meyer 1, SW NE SE 16-3n-6w, 12 miles east and 4 miles north of Collinsville, recovered 150 ft of oil and 30 ft of oily mud on hour's drill-stem test at 2352-54 ft; casing probably will be set. Test is far removed from production and may cause flurry of activity on west side of basin near Mississippi River.

Franklin County: Ike W. Taylor's Old Ben Coal Co. 1, NE NW NE 19-5s-2e, 1½ miles southeast of Sesser, waiting on cement with 5½-in at 2673 ft to test Aux Vases at 2690-2707 ft. On hour's drill-stem test 1300 ft of oil were recovered. Elev 453 ft. Taylor's test is ¾ mile northeast J. W. Menhall's Old Ben Coal Co. 1, NW NE NW 25-5s-1e, also has set 5½-in at 2684 ft to test Aux Vases at 2690-2707 ft. Test was drilled by Sun Oil Co. and taken over by Menhall at 2880 ft.

Gallatin County: R. B. Martin's L. Bahl 1, SE SE NW 15-8s-9e, Seaboard farmout, 5 miles west of Inman field, swabbed 80 bbls natural in 24 hrs from Cypress 2482-94 ft; to be deepened with cable tools.

Clinton County: E. Frank Jones' Harrison, NE SE NW 2-2n-2w, pumped 220 bbls in 20 hrs natural from Benoist 1210-19 ft. Offsets Texas Co.'s Price Gray 1, Devonian gas discovery completed several months ago but never produced. Jones well appears to be best shallow discovery of past year. Texas Co. rigging rotary for Gray 2, SW NW SE 35-3n-2w, offsetting Jones discovery.

COMPLETIONS

Bond County: Wildcat—Shell's State Bank 1, sw ne sw 4-5n-2w, abnd 1250 ft.

Clay County: Wildcats—Shaffer & Toler's Large 1, c nw se 24-3n-6e, abnd 3107 ft.

B. F. Williams' Witte 1, c se se 5-5n-6e, abnd 2751 ft.

Crawford County—Roy R. Powers' Hart 1-A, 25 ft s of c n½ sw nw 20-8n-13w, abnd 1170 ft.

Effingham County: Wildcat—Roy R. Powers et al's Lohman 1, c e½ se sw 28-9n-6e, abnd 2466 ft.

Hamilton County—Texas Co.'s McGill 3, c w nw sw 27-6s-6e, A. V. 3082-3102 ft, td 3102 ft, 90 bbls.

Hamilton County: Wildcat—Reward Oil et al's Johnson 1, c w½ se ne 3-6s-7e, abnd 3407 ft.

Jefferson County: Wildcat—Seaboard Oil's Yeager 1, nw se ne 28-3s-4e, abnd 3193 ft.

Marion County—Lewis Lilly's Leonard Est. 1, ne se ne 17-1n-1e, Weil. 1667-76 ft, td 1676 ft, 55 bbls.

C. F. Frazier et al's McBride 1, sw sw 34-1n-2e, Ben. 1972-80 ft, td 1980 ft, 5 bbls.

Richland County—Pure's Roberta A-1, sw nw 12-4n-9e, McC. 2922-30 ft, td 2970 ft, 45 bbls oil.

Pure's Murvin B-1, nw nw 27-4n-9e, Weil. 2703-10 ft, td 7210 ft, 165 bbls.

St. Clair County: Wildcat—C. W. Young's Timpner 1, nw sw ne 29-3s-6w, abnd 650 ft.

Wayne County—Bell Bros. et al's Wilson 1, 100 ft e of c sw nw 18-1s-5e, abnd 3102 ft.

Eason Oil Co.'s Powless 1, se nw se nw 4-1s-6e, abnd 3278 ft.

Texas Co.'s Harlan 2, c w½ se se 21-1s-6e, abnd 3306 ft.

Texas Co.'s Warren 1, nw nw nw 27-1s-6e, A.V. 3058-94 ft, McC. 3190-3200 ft, td 3210 ft, 317 bbls.

Results on Industry's Prospecting Fronts

Three oil producers were among 51 wildcats reported during the week, bringing to 116 the number of wildcat oil strikes during the year.

Illinois: Encouragement from showing in Madison County.

California: Kern County reports new heavy oil strike.

Southwest Texas: Many wildcat starts despite transportation difficulties.

West Texas: Andrews County strike starts six offsets. New area in Coleman County.

Oklahoma: Pawnee County well makes 135 barrels hour.

New Penn's Simpson 1, 100 ft e of ne se 21-2s-9e, abnd 3410 ft.

Wayne County: Wildcat—New Penn.'s Harriss 1, c w½ nw ne 28-2s-9e, L.O'H. 3277-82 ft, Rosl. 3305-06 ft, td 3311 ft, 201 bbls.

White County—Superior's Fitton 33, sw ne sw 23-4s-14w, Cyp. 2590-2610 ft, A.V. 2854-80 ft, td 2965 ft, 34 bbls.

Sun's Greathouse 1, c nw se 33-4s-14w, td 2729 ft, gas input.

WILDCAT STARTS

Clark County—Roy W. Ide's Ohme 1, ne ne sw 18-11n-14w, lcn.

Don O. Russell's Whiteside 1, c sw nw 14-13n-14w, dr.

Clay County—Pure's Greenlow 1, c sw ne 3-5n-7e, lcn.

Cumberland County—Authur Leatherman's Shores 1, nw sw nw 31-9n-11e, dr.

Gallatin County—R. B. Martin's Behl 1, se se nw 15-8s-9e, lcn.

Hamilton County—Seaboard Oil Co.'s Kiefer 1, c s½ se sw 30-3s-5e, lcn.

Spitzigel et al's Kieth Est. 1, nw nw se 26-4s-7e, lcn.

Jackson County—F. R. Wiley et al's Unknown 1, sw se sw 7-9s-3w, dr.

Jefferson County — Dick Schwab et al's Hutchings-Holderman 1, ne se nw 36-1s-1e, dr.

Richland County—Pure's Hosler 1, c sw sw 22-4n-9e, lcn.

Washington County—Shell's Mill 1, se sw sw 31-2s-1w, dr.

Indiana

Posey County Wildcat Shows Small Producer

Wildcat in Posey County showing for small producer; two Aux Vases wells in new Posey field testing; good well completed in Hazleton field, Gibson County.

Posey County: Sun Oil Co.'s Byrd 1, NE SE 4-8s-14w, swabbing barrel an hour after light shot in Aux Vases at 2602-21 ft; total depth 2653 ft in McClosky.

Gulf's Frank Schutte 1, C NE NW 8-7s-12w, offset to Paul Rossi's Mauzy 1, a discovery well, is waiting after squeeze to shut off water; will test Aux Vases 2607-11 ft.

Gibson County: Muter Oil Co.'s Ewing 1, C N½ Don. 99-1n-10w, swabbing 10 bbls an hour from McClosky natural at 1785-89 ft; well is one of best in Hazleton field.

COMPLETIONS

Gibson County: Wildcats—Walter Miller et al's Ewing 1, 79-1n-10w, McC 1801-14 ft, 58-62 ft, td 1863 ft, 8 bbls.

Robt. A. Heussler's Morratta 1, c w½ se nw 34-1s-10w, abnd 2017 ft.

Posey County—Sloan et al's Scherer 2, se nw se nw 13-7s-13w, Tar Springs 1941 ft, td 1953 ft, 35 bbls.

Spencer County—W. E. Gary, Jr.'s Frank & Niles 1, n½ se se 36-7s-7w, Palestine 947 ft, td 950½ ft, 14 bbls.

Vanderburg County: Wildcat — Ernest Eslick's Karn et al 1, c nw nw 19-6s-11w, abnd 2730 ft.

Warrick County—Forrest et al's Sutton 1, sw se sw 35-4s-6w, McC 1165-72 ft, td 1172 ft, 40 bbls.

KENTUCKY

WILDCAT START

Daviess County—J. C. Miller et al's Birch 1, 3-P-28, lcn.

U. S. Drilling Operations in Week Ended May 9, 1942

STATE	ALL WELLS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	*Miscel.	Total 1942	Total this Date 1941	WILDCATS COMPLETED‡ — THIS WEEK Total	Oil	Gas	Dry	Distillate	Total 1942
Alabama	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	3
Arkansas	.....	.....	.....	.....	.....	46	57	.....	.....	.....	.....	.....	7
California	8	6	.....	2	.....	284	383	.....	.....	.....	.....	.....	8
Colorado	.....	.....	.....	.....	.....	4	6	.....	.....	.....	.....	.....	.....
Georgia	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
Illinois	21	8	.....	12	1	638	1,159	8	1	.....	7	.....	148
Indiana	6	4	.....	2	.....	131	178	3	1	.....	2	.....	16
Kansas	33	9	2	17	5	549	700	9	.....	.....	9	.....	130
Kentucky	.....	.....	.....	.....	.....	50	101	.....	.....	.....	.....	.....	3
Louisiana	18	11	1	6	.....	383	476	5	.....	1	4	.....	61
Michigan	12	9	.....	3	.....	236	283	3	.....	.....	3	.....	57
Mississippi	2	.....	.....	2	.....	55	55	2	.....	.....	2	.....	16
Missouri	.....	.....	.....	.....	.....	9	24	.....	.....	.....	.....	.....	.....
Montana	7	5	1	1	.....	58	66	.....	.....	.....	.....	.....	.....
Nebraska	1	1	.....	.....	.....	18	32	.....	.....	.....	.....	.....	6
New Mexico	6	3	1	2	.....	144	128	.....	.....	.....	.....	.....	10
New York	21	12	.....	.....	9	431	244	.....	.....	.....	.....	.....	1
Ohio	20	4	6	10	.....	416	548	.....	.....	.....	.....	.....	.....
Oklahoma	15	7	1	5	2	569	708	.....	.....	.....	.....	.....	93
Pennsylvania	42	38	3	1	.....	1,165	1,331	.....	.....	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	2	7	.....	.....	.....	.....	.....	.....
Texas	107	66	3	32	6	2,527	3,337	21	1	.....	20	.....	403
West Virginia	13	1	11	1	.....	257	241	.....	.....	.....	.....	.....	.....
Wyoming	.....	.....	.....	.....	.....	30	38	.....	.....	.....	.....	.....	2
Total this week	332	184	29	96	23	8,007	10,102	51	3	1	47	.....	966
Total last week	343	180	26	95	42	7,675	9,512	62	6	1	55	.....	915
Total this year	8,007	4,622	639	1,964	782	.....	.....	966	116	13	831	6	.....

* Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

Kansas

Dodge City Test Below 6000 Teet

Deep test Dodge City Basin below 6000 ft; Sun City shows encourage tests.

Comanche County: State's deepest test, Sinclair Prairie Oil Co.'s Exchange Bank 1, SE SE SW 27-29-19w, is drilling below 6243 ft after finding no show in Mississippi lime, top 5280 ft.

Phillips County: Phil-Han Oil Co.'s 1, NW 11-3s-10w, is a location on farmout from Phillips Petroleum Co., 2 mi SE Dayton field.

Sumner County: E. B. Shawver's Grant 1, C SW NW 9-34-2e, west of Gueda Springs, is setting pipe to test Mississippi, 3418 ft.

COMPLETIONS

Barber County: Medicine Lodge—Barber's McKee 7, c se 20-33s-13w, Miss. 4515 ft, td 4992 ft, perf casing, 1250 gals acid, 4,000,000 gas.

Barton County: Kraft-Prusa—Texas Co.'s Radenberg 1, c n½ sw ne 5-17s-11w, Arb. abnd 3397 ft.

Barton County: Prusa—Sinclair Prairie's Roesner 4, c n½ sw sw 17-16s-11w, Arb. 3394 ft, td 3400½ ft, pb 3201 ft, abnd.

Barton County: Stickney—Darby's Susank 1, se se se 19-16s-13w, Arbuckle 3385 ft, td 3390 ft, 1000 gals acid, 3000 bbls.

Barton County: Wildcats—N. Appleman Co.'s Wondra 1, nw nw se 4-17s-12w, Anhy. 765 ft, Ft. Riley 1740 ft, Florence 1840 ft, Wreford 1930 ft, Topeka 2695 ft, Lansing 3118 ft, Congl. 3365 ft, Arb. 3370 ft, abnd 3412 ft.

Bartlett & Crum's Borr 1, ne se sw 12-17s-12w, Topeka 2610 ft, Lansing 3050 ft, Congl. 3327 ft, Arb. 3423-53 ft, abnd 3453 ft.

Butler County: Eldorado—Cities Service's Chesney 122, sw se se 21-25s-5e, K. C. 1926 ft, td 2207 ft, pump 40 bbls.

Ellis County: Wildcat—Sharon Drlg. Co.'s Orth 1, c e½ ne ne 5-14s-19w, Anhy. 1545 ft, Topeka 3269 ft, Lansing 3581 ft, show oil 3765-84 ft, Base KC 3837 ft, Congl. 3864 ft, Arb. 3905 ft, abnd 3954 ft.

Ellsworth County: Wildcat—I. W. Murfin et al's Appel 1, c n½ ne ne 9-18s-10w, Anhy. 495 ft. Lansing 2928 ft, Congl. 3228 ft, Arb. 3257-75 ft, abnd 3275 ft.

Greenwood County: Virgil—Nathan & Braden's Williams 1, c se nw 10-24s-12e, Miss. 1818 ft, abnd 1868 ft.

Harper County: Wildcat—Westgate-Greenland's Lewis 1, sw se nw 22-31s-5e, Layton 2303 ft, B'ville 2944-50 ft, Miss. 3018-50 ft, abnd 3050 ft.

Jackson County: Wildcat—L. B. Rogers et al's Lincoln Liberty Life 1, c ne se, Lansing 908 ft, Base KC 1230 ft, Base Ft. Scott 1440 ft, sand 1736-53 ft, broken sand 1753-65 ft, sand 1822-41 ft, Miss. 2078 ft, Misener 2534 ft, Hunton 2539 ft, abnd 2714 ft.

Jefferson County: McLouth—McLaughlin et al's Zachariah 1, c se ne 20-9s-20e, T. McLouth sand 1349 ft, td 1365 ft, 6,336,000 gas.

Louring's Fryhoper 1, ne ne 7-10s-20e, Miss. 1635 ft, abnd 1640 ft.

Marion County: East Lost Springs—Veeder Supply Co.'s Williams 2, c n½ sw sw 35-17s-4e, Miss. 2333 ft, abnd 2390 ft.

Pratt County: Cunningham—Sinclair's Greider 5, c s½ se se 26-27s-11w, Lansing 3442 ft, td 3491 ft, 6000 gals acid, pump 276 bbls oil, 39 bbls water.

Skelly's Steffen C-4, c e½ nw se 35-27s-11w, Lansing 3487 ft, td 3533 ft, 5000 gals acid, 1000 bbls.

Reno County: Hendrickson—Stanolind's Peterson 1, se se nw 2-23s-10w, Viola 3698 ft, td 3761 ft, pb 3744 ft, 1250 gals acid, flow 3000 bbls.

Rice County: Geneseo—Continental et al's Wood 12, sw ne se 12-18s-8w, Arb. 3194 ft, td 3201 ft, 1000 bbls.

Rice County: Chase—Lauck & Moncrief's Murphy B-1, c n½ ne se 21-19s-9w, Arb 3217 ft, td 3249 ft, 1500 gals acid, pump 348 bbls.

Rice County: Keesling—Olsen's Petterson 1, c s½ sw ne 4-20s-9w, Arb. 3244 ft, td 3247 ft, 500 gals acid, pump 555 bbls.

Rice County: East Welch—H. H. Royer et al's Lackey 1, c w½ nw ne 12-21s-6w, Miss. 3343½ ft, abnd 3387 ft.

Reno County: Wildcat—Helmerich & Payne's Laviellet 1, ne ne se 23-22s-10w, Anhy. 375 ft, Ft. Riley 1575 ft, Florence 1675 ft, Wreford 1765 ft, Cottonwood 1930 ft, Neva 1960 ft, Topeka 2690 ft, Lansing 3192 ft, Marmaton 3485 ft, Congl. 3530 ft, Kinderhook 3598 ft, Viola 3603 ft, cored 3604-08 ft, Simpson shale 3708 ft, Simpson sd 3721 ft, cored 3724-29 ft, sand, show oil and shale, Arbuckle 3769 ft, abnd 3825 ft.

Russell County: Donovan—Wold Creek's Donovan C-2, c n½ se sw 10-15s-15w, Arb. 3305 ft, abnd 3322 ft.

Russell County: Wildcat—Cities Service's Hupfer 1, sw se ne 19-14s-12w, Anhy. 670 ft, Ft. Riley 1610 ft, Wreford 1800 ft, Neva 1970 ft, Topeka 2570 ft, Lansing 2876 ft, Arbuckle 3252-90 ft, abnd 3290 ft.

Stafford County: Zenith—Magnolia's Tretbar Bros. 7, c n½ ne ne 12-24s-11w, Viola 3706 ft, pay 3714-18 ft, td 3719 ft, set packer at 3705-07 ft, 4000 gals acid, 3000 bbls.

Trego County: Wildcat—Darby's Haneke 1, se nw se 24-11s-21w, Lansing 3494 ft, base KC 3736 ft, Congl. 3788 ft, Arb. 3818 ft, At. 3818-33 ft, abnd 3850 ft hole full water.

Woodson County: Batesville—Bisango et al's Tipton 1, sw se nw sw 32-25s-14e, Arb. 1884 ft, abnd 1895 ft hole full water.

OLD WELLS DEEPENED

Marion County: Lost Springs—Harwood's Novak 2, ne ne se 27-17s-4e, otd 2399 ft, Miss. 2325 ft, abnd 2470 ft.

Rooks County: Westhusin—D. W. Trickett's Dougherty 1, c w½ nw ne 13-9s-17w, otd 2352 ft, Lansing 3142 ft, td 3335 ft, pay 3329-31 ft, 5000 gals acid, pump 525 bbls.

Russell County: Gorham—Hayes & Anschultz's Ball 1, se ne nw 16-14s-15w, otd 2824 ft, granite wash 3315 ft, abnd 3365 ft.

Russell County: Sellens—Leader's Sellens A-2, nw ne sw 26-15s-13w, otd 3272 ft, quartzite 3376 ft, td 3543 ft, 500 gals acid, took 200 bbls water in 15 mins, salt water disposal well.

Stafford County: Zenith—Sinclair Prairie's McComb 1, sw nw nw 24-24s-11w, otd 3843 ft, granite 4714 ft, td 4723 ft, took 200 bbls water per hr by gravity, salt water disposal well.

WILDCAT STARTS

Barber County—Pryor & Lickhart et al's Atkins 1, c e½ se sw 14-30s-15w, machinery.

Champlin & Pryor et al's Ewers 1, sw sw sw 7-32s-14w, cellar.

Barton County—Falcon-Seaboard and Barnsdall's Gross 1, sw sw ne 26-16s-14w, dr.

Cowley County—Westgate - Greenland Oil's Morton 1, c n½ ne sw 2-33s-5e, lcn.

Ellsworth County—Cities Service Oil's Andrews 1-A, nw nw se 4-17s-8w, rotary.

Pawnee County—Cities Service Oil's Evans 1, ne se sw 18-21s-17w, lcn.

Pratt County—Earl Wakefield et al's Jones 1, ne nw ne 24-28s-13w, machinery.

Stafford County—Stanolind's Vincent 1, c e½ sw se 5-24s-11w, lcn.

Oklahoma

Pawnee County Well Makes 135 Barrels Hour

New Wilcox sand field in Pawnee; Apache edge wells testing.

Pawnee County: A new Wilcox sand pool is assured at Alma Oil Co.'s Deroyn 1, SW NW NW 25-23-3e, which topped Wilcox at 3880 ft, drilled to 3891 ft, tested 135 barrels first hr through 7-in; tested for 436 barrels 4 hrs, for average 109 bbls per hr. Well made estimated 16,000,000 gas, no water showing.

COMPLETIONS

Caddo County: Apache—Texas Co.'s N. B. Smith 2, ne se ne 3-5n-12w, Bromide, td 3827 ft, 5000 bbls.

Creek County: Hickory Grove—Mid-Continent's Bear 2, se ne se 3-14n-7e, Bartlesville 3131, pay 3146-47 and 3155-58 ft, td 3161 ft, flow 72 bbls.

Creek County: Glenn — Sinclair Prairie's Berryhill 36, 220 ft e of n½ s½ 16-17n-12e, Glenn sand 1408 ft, td 1569 ft, shot 40 qts, pump 21 bbls.

Marshall County: Cumberland—Pure's Williams 1, se se nw 20-5s-7e, McLish 5472 ft, sand 5878 ft, pay 5891 ft, td 5911 ft, 636 bbls.

McIntosh County: Unnamed — McNutt & Young's Stickler 1, c sw nw 18-12n-17e, abnd 1560 ft.

Okfuskee County: North Okemah—British-American's Dodson 1, sw nw nw 31-12n-10e, Hunton 3790 ft, td 3794 ft, 500 gals acid, flow 45 bbls oil 45 bbls water.

Oklahoma County: Oklahoma City—British-American's Lincoln Terrace 1, se sw ne ne 27-12n-3w, Wilcox 6384 ft, td 6491 ft, shot 200 qts, pump 435 bbls.

Osage County: Osage City — Barnsdall's Water Flood 5, se se se nw 20-21n-9e, sand 318-43 ft, abnd 342 ft.

Osage County: Unnamed—Ohio Osage 1, sw c ne 32-22n-9e, Bartlesville 2190 ft, 22,000,000 gas, 760 lbs rp, 2210 ft.

Osage County: Avant—Sinclair Prarie's 57, ne nw sw nw 20-23n-12e, Bartlesville 1635 ft, td 1759 ft, shot 30 qts, pump 25 bbls.

Osage County: Pershing—Oliphant 1, 30 ft s nw sw se, Bartlesville 2450 ft, abnd 2471 ft.

Pawnee County: North Teriton—Selby Oil & Gas' Little 3, se se sw 1-20n-7e, Bartlesville 2450 ft, abnd 2471 ft.

Seminole County: Transco — Texas Co.'s Jackson 1, ne se se 15-7n-7e, abnd 3513 ft in Cromwell.

OLD WELLS DEEPENED

Caddo County: Cement—Nichols' Rigney 2, sw nw nw se 12-5n-9w, otd 2475 ft, sand 3700-3848 ft, td 3872 ft, perf liner, flow 150 bbls, tubing.

Pottawatomie County: St. Louis — Reda Pump's Wallace 1, nw sw sw 14-7n-4e, otd 3818 ft, green shale 4360 ft, td 4362 ft, pump 60 bbls water.

Seminole County: E. Earlsboro — Gulf's Payne 8, sw se se 18-9n-6e, otd 4257 ft, Wilcox 4288 ft, td 4294 ft, shot 70 qts, pump 75 bbls.

WILDCAT STARTS

Beaver County—Mid Plains' Matkins 1, se se 7-6n-20e, spud.

Caddo County—Amerada Pet.'s Smith 1-A, c se sw 14-10n-13w, lcn.

Beckwith & Hallston's Hipps 3, sw sw nw 4-6s-10w, dr.

Creek County—Shell's Doan 1, nw se nw 16-14n-7e, dr. Tibbens Oil Co.'s Abraham 1, c nw ne 19-14n-9e, lcn.

Lincoln County—Coralena et al's School 1, sw sw se 36-17n-5e, cellar.

Noble County—Deep Rock's Schultz 1, nw sw se 9-22n-2e, dr.

Osage County—Johnson Oil & Ref.'s Osage Tribe 1, 32-25n-6e, lcn.

Pottawatomie County—Atlantic's Hamil 1, c ne sw 27-8n-3e, lcn.

Jordan & Atlantic's Pecere 1, 34-10n-3e, dr.

Seminole County—Keener Oil & Gas Co.'s Kolar 1, sw sw sw 5-12n-6e, rig.

Tulsa County — Culbertson & Nevell's Schluneger 1, sw se se 28-20n-14e, dr.

NEBRASKA

COMPLETION

Richardson County: Falls City — E. S. Towle et al's Seibberson 1, nw sw se se 17-1n-16e, Hunton 2273 ft, td 2320 ft, perf cas, pump 50 bbls oil 37 bbls water.

NEW MEXICO

COMPLETIONS

Eddy County—Addison Oil Co.'s Shugart 2-A, c nw ne 29-18s-31e, flow 78 bbls natural 20/64-in, 3586-3705 ft, td 3729 ft.

W. D. Cunningham et al's State-Featherstone 2, ne se ne 25-17s-27e, elev 3537 ft, top white lime 471 ft, abnd 580 ft.

Lea County: Cooper—Kan-Mex Oil Corp.'s Vaughn-Conoco 5-B-3, se ne nw 3-24s-36e, 10,000,000 gas natural perf 22 shots 3220-3350 ft, td 3590 ft.

Lea County: Culwin—Culbertson-Irwin and Southern Cal. Pet. Corp.'s Bowman-Texaco 1, c nw nw 28-19s-32e, pump 160 bbls 23.5-gr oil, plus 16 percent bs&w, used 1500 gals 2745-65 ft, td td 2811 ft.

Lea County: Maljamar—Drilling & Exploration's oJhns-Emperor 3-B, c ne sw 24-17s-32e, flow 31 bbls ½-in, acid 4000 gals 4150-4345 ft.

Lea County: West Eunice—Continental's State 1-J-24, nw ne nw 24-21s-34e, abnd sul w 3930 ft.

WILDCAT STARTS

Eddy County—P. B. English et al's Hinkle 1, c ne ne 22-19s-31e, lcn.

E. Orcutt et al's State-Newman 1, c se sw 16-21s-26e, sp.

West Texas

Andrews Strike Forces Drilling Six Tests

Ellenburger discovery in Andrews County precipitates 6-well drilling program on short-term leases. Coke County's first oil producer in process of completion. Northeastern Ward County wildcat making production test at 10,100 ft, and shallow prospect showing for producer.

Andrews County: Phillips Petroleum Co.'s University-Andrews 1-A, C SW SE Sec 30, Blk 10, 1¼ miles northwest of Permian gasser on Embar prospect and mile northwest of an 8368-ft Ordovician failure, flowed 107 bbls first hour and 137 bbls second hour at 7855 ft, with 5½-in 7806 ft. Natural producer was indicated when the well flowed at estimated rate of 50 bbls 43-gr oil hourly via tester used at 7760-7855 ft in Ellenburger, topped 7750 ft, elevation 3246 ft. Top Simpson called 7660 ft, being about 300 ft high to the nearby deep failure while Ellenburger is about 635 ft high, largely because of 320-ft thinner section of Simpson. This eighth producing Ellenburger strike in district passed up prolific gas with oil flow from Clear Fork 6215-6450 ft, establishing 3 zones for the company's large block. Two projected deep tests authorized by

company on University fee to northwest and southwest of discovery, since lease on these 160-acre tracts expire next October. Four scheduled Permian tests to be drilled on 160-acre tracts that expire June, 1942, and others to follow by Phillips, Atlantic and Stanolind due to 1942 expirations.

Magnolia's Ralph 1, west outpost for Fullerton pool, tested 10 bbls oil hourly after acidizing Clear Fork at 7048-7306 ft with 14,000 gals, then perforated upper gas zone 6950-7015 ft to reacidize. Fullerton Oil Co.'s Wilson 3, north offset its discovery, was acidizing upper pay at 7040-7205 ft. Mascho Oil Co.'s University-Sun 1, 2 miles northwest of Emma pool and originally slated to be abandoned after developing salt water at 4514 ft, elevation 3216 ft, made head oil before bridging from dump shot of 310 quarts of nitro. Production test deferred until cavings removed. Siemoneit Drilling Co. and Henry Roach's University-Texaco 1, 1¾ miles south of West Fuhrman pool, cemented pipe 5½-in 4325 ft after drill-stem test at 4550-80 ft yielded 60 ft oil and 65 ft drilling fluid, elevation 3218 ft.

Coke County: W. F. Morgan et al's Craft 1, C NE NE H&TC 276, Blk 1-A, southwest offset to old test that showed promise of producer from same Pennsylvanian limestone, installing pump after showing for 50 to 100 bbls oil daily, acidized 5000 gallons 3818-28 ft, elevation 3194 ft.

Ward County: Shell's Sealy-Smith 1, NE NE SE GMMB&A 38, Blk A, was undergoing production test in Ordovician at 10,100 ft. No details released as to identity of pay zone and thickness, although lease tankage erected in anticipation of oil producer. This prospect is on 19,725-acre lease acquired January, 1941.

Reagan County: Amerada's University 1-R-E, 1⅛ miles southeast of nearest production in Barnhart pool, flowed 332 bbls fluid, 86 percent oil, on 20-hr test, varying from ¼- to ½-in tubing choke, after using 5000 gallons acid through Ellenburger perforations 9173-9223 ft, elevation 2726 ft. No formation water is present, according to reports.

COMPLETIONS

Borden County: Wildcat—Ozark Chemical Co.'s Clayton-Johnson 1, 2055 ft from e and 280 ft from n lines T&P 15, blk 31, T-4-N, water well in Yates, abnd 1566 ft.

Brewster County: Wildcat—J. H. Gordon et al's Phigpen 1, 990 ft from n and 470 ft from w lines HE&WT 193, blk G-4, abnd 325 ft.

Cochran County: Slaughter — Magnolia's Dean 3-A, 1980 ft from s and 660 ft from e lines leag 58, Martin CSL, flow 292 bbls cas, acid 10,500 gals 4925-59 ft.

Magnolia's Mallet 13-C, sec lab 6, leag 51, Scurry CSL, flow 584 bbls cas, acid 10,500 gals 5040-63 ft.

Magnolia's Woodley 29, nec lab 8, leag 57, Oldham CSL, flow 545 bbls cas, acid 10,500 gals 4910-60 ft.

Superior's Dean 4, 6695 ft from w and 440 ft from s lines leag 57, Martin CSL, flow 178 bbls cas, acid 9000 gals 4927-5014 ft.

Crane County: Sand Hills—Gulf's Waddell 39, c n¼ of n¼ H&TC 18, blk 3, flow 1931 bbls oil, plus 868 bbls water, 2-in, acid 6000 gals, Permian 4220-44 ft, td 5701 ft and pb to 4244 ft.

Magnolia's Lea 12, 1980 ft from s and 3300 ft from e PSL 4, blk B-32 flow 363 bbls ½-in, acid 5500 gals 4364-4700 ft.

Magnolia's Lea 13, c sw se PSL 4, flow 170 bbls ½-in, acid 7500 gals, 4400-4685 ft.

Crane County: Dune—Wasomes Oil Co.'s University 3-5, sw nw nw sec 5, blk 30, flow 138 bbls 1-in, shot 580 qts 3184-3384 ft.

Crockett County: Wildcat Discovery—Sun's Shannon 1, 660 ft out swc w 1427-ac of n 1800-ac leag 1, Archer CSL, elev 2541 ft, Yates sand 1135-1231 ft, pump 364 bbls 18.5-gr, 91 bbls water, lime 2080-89 ft.

Ector County: Goldsmith — Gulf's Goldsmith 388, nec nw T&P 18, blk 44, T-1-S, flow 770 bbls 2-in, acid 4000 gals, td 4260 ft.

Cliff Mooers et al's Slater 1, nec se T&P 12, blk 45, T-1-S, flow 58 bbls oil and 83 bbls water, acid 3000 gals 4240-54 ft, td 4266 ft.

Gaines County: Cedar Lake—Geo. P. Livermore's White-Humble 1, 690 ft from s and 1980 ft from e lines D&W 4, blk H, swab 587 bbls natural, cas, 4597-4665 ft, td 4752 ft.

Hockley County: Slaughter—Humble's Coons 2, 4887 ft from n and 530 ft from w lines PSL 11, blk X, flow 778 bbls cas, acid 8000 gals perf 4910-5000 ft, td 5010 ft.

Magnolia's Mallet 19-F, sec lab 8, leag 49, Edwards CSL, flow 1703 bbls cas, acid 10,500 gals 4917-5023 ft.

Magnolia's Mallet 21-F, sec lab 3, leag 49, Edwards CSL, flow 1016 bbls cas, acid 10,500 gals 4960-5005 ft.

Texas Co.'s Slaughter 109, nwc lab 75, leag 38, Zavalla CSL, pump 382 bbls, acid 15,500 gals 4985-95 ft, td 5016 ft.

Texas Co.'s Slaughter 118, swc lab 75, leag 38, Zavalla CSL, pump 366 bbls, plus 6% bs&w, acid 11,000 gals 4990-5011 ft, td 5043 ft.

Texas Co.'s Slaughter 132, swc lab 89, leag 38, flow 1386 bbls cas, acid 13,500 gals 4980-5025 ft.

Mitchell County: Iatan—Magnolia's Foster 13, near c sw ne T&P 7, blk 29, T-1-S, pump 120 bbls, acid 2000 gals 2350-2825 ft.

Pecos County: Abell—Magnolia's Erickson-State 2, near c lot 4, H&GN 26, blk 9, pump 49 bbls oil and 38 bbls water, acid 1500 gals Clear Fork, perf 3930-46 ft, td 3963 ft.

Magnolia's Grove-State 2, near c lot 6, H&GN 26, blk 9, flow 789 bbls ½-in natural, Ellenburger 5840-84 ft.

Pecos County: Conry-Davis—Geo. T. Abell et al's Simmons-State 1, 330 ft from s and 990 ft from w lines H&GN 30, blk 9, elev 2373 ft, abnd hfw 2408-10 ft.

Pecos County: Walker—Cardinal Oil Co.'s University 2-B, 1650 ft from n and 560 ft from e lines sec 24, blk 16, flow 104 bbls 1-in, shot 100 qts nitro 1994-2120 ft.

Pecos County: Wildcat—J. N. Gregory et al's Neville-Pure 1, c ne se H&GN 42, blk 12, elev 2356 ft, Yates sand 820 ft, San Andres 1602 ft, sul w 1617-25 ft, abnd 1681 ft.

Runnels County: Beddo—Art Tucker et al's King 4-A, 200 ft out nwc tract, blk 51, D. Diaz sur No. 532, abnd (conflicts with OPC) 2293 ft.

Swisher County: Wildcat—W. J. Gourley-Weiner & Devore's Kleen 1, c sw BS&F Ry 120, blk M-10, elev 3408 ft, top lime 4148 ft, 1st salt w 5214 ft, abnd 5226 ft.

OLD WELL DEEPENED

Crane County: Gulf-McElroy — Gulf's McElroy 19, 771 ft s and 12 ft e of nwc sec 200, blk F, otd 2927 ft, pump 320 bbls, shot 1090 qts 2790-2988 ft.

WILDCAT START

Scurry County—Humble's Newman 1, c ne sw H&TC 258, blk 97, lcn 8000-ft test.

West Central Texas

150-Barrel Flow Opens New Area in Coleman

Coleman County discovery makes natural flow, and another strike showing for pumper.

Coleman County: W. M. Holland and Huffman's Bailey 1, SE NE SW HT&B 17, 3½ miles southeast of Echo, opened new territory in swabbing 150 bbls daily after using 8000 gallons acid in Marble Falls lime 2720-93 ft. H. T. Owen and H. H. Adams' Coker 1, C NW SE GH&H 72, Blk 2, 1¾ miles north of deeper production in Silver Valley pool, flowed 199 bbls 46-gravity oil natural, ½-inch choke, gas-oil ratio 200/1, from Morris sand in Strawn series at 3040-64 ft, elevation 1927 ft. Owners have 700 acres in area, and an offset is being drilled by Anderson-Prichard Oil Corp.

COMPLETIONS

Brown County—Burton McCullum, agent's Carter 2, nwc lot 6, Chas. Messer sur 127, pump 4 bbls oil, plus 30% water, acid 1000 gals 901-36 ft, td 950 ft.

Burton McCullum, agent's Page 1, nwc lot 5, Chas. Messer sur 127, 140,000 ft gas, shot 60 qts 931-37 ft, td 955 ft.

Burton McCullum, agent's Sewalt 10-B, nec of P. M. Whittington sur, pump 2 bbls oil, plus 67% water, acid 500 gals 938-44 ft, td 952 ft.

Burton McCullum, agent's Sewalt 20-B, 1650 ft out nec P. M. Whittington sur, pump 3 bbls oil, plus 88% water, acid 500 gals 875-934 ft.

Coleman County: Discovery Wildcat—H. T. Owen & H. H. Adams' Coker 1, c nw se GH&H 72, blk 2, 1¾ mi n by e of deeper production, elev 1927 ft, top Cross Cut 2923 ft, Morris sand 3040-50 ft, td 3064 ft, flow 199 bbls 46-gr natural, ½-in, ratio 200/1.

Coleman County—M. J. Delaney et al's Green 1, sec of ne 40-ac lot 1, Hiram Kegans sur, flow 140 bbls natural ¼-in, Strawn 3913-43 ft, td 3944 ft.

Lewis Prod. Co.'s Babston 1, nec se 42-ac lot 1, Kegans sur, flow 36 bbls ¾-in, shot 50 qts nitro Gray sand 3903-24 ft, td 3926 ft.

Comanche County: Wildcat—F. O. Akin et al's Pink Scott 1, c nw se H&TC 21, blk 2, abnd 2800 ft.

Jones County: Wildcat—H. W. Lee et al's Roberts 1, 330 ft from e and 1100 ft from n lines T&P 2, blk 16, elev 1734 ft, abnd 2623 ft.

Shackelford County—Roeser-Pendleton and Continental's Cook 11-A-117, ET 117, pump 90 bbls oil plus 10 bbls water 1693-1702 ft.

Stephens County—J. R. Tolbert et al's Moon 1, S.P. Ry. sec 5, blk 3, 3,020,000 gas, lime 4008-20 ft, td 4033 ft.

OLD WELL DEEPENED

Coleman County—States Oil Corp.'s Hudson 1, 1980 ft from s and 467 ft from w lines T&NO 22, blk 2, otd 3485 ft (gasser), flow 928 bbls ¾-in 3487-3522 ft, td 3540 ft.

WILDCAT START

Comanche County—F. O. Akin et al's H. Belamy 1, 990 ft from e and 660 ft from n lines sw H&TC 12, blk 2, lcn.

North Texas

New Zone at Benton; Strike in Cooke County

New oil zone given Benton pool, Montague County, and Cooke County has prospective shallow Ellenburger discovery. Jack County's recent deep strike develops water trouble.

Montague County: Sinclair Prairie's Benton 2, east offset to its Bend lime discovery in Benton pool, became first Strawn producer in flowing 123.6 bbls oil on 3-hr official gauge after using 1500 gallons acid through perforations 4535-47 ft. Proved dry in Bend and Ellenburger topped at 5038 ft and 5175 ft, respectively. Company's Jones 1, 1¼ miles northeast of Forestburg, changing to cable tools after plugging back from dry Ellenburger 8630-96 ft to 7320 ft to test Bend saturation with 7-in at 7176 ft, and Henderson 1, 2 miles east by north of Denver, fishing drill pipe at 6935 ft in Bend, topped at 5695 ft.

Continental's Mueller 1, prospective pool opener 6 miles east of Bowie, experienced difficulty in preventing uncontrolled flow of oil and gas while trying to set 5½-in liner to test Simpson pay 7132-7223 ft. Pumping units are being installed by company on two of its Stoneburg wells, including Winder 1, deepened discovery that tested 92 bbls oil and 23 bbls water on 24-hour swabbing test through perforations opposite Bend at 6223-33 ft, having plugged back from water in Viola 6555-6610 ft. Drummond 1, northeast offset, swabbed 152 bbls oil 12 hrs from Bend conglomerate 6215-41 ft, and will be pumped. Company's J. F. Yowell 1, mile northwest of discovery, awaiting orders after yielding 7000 ft salt water on drill-stem test 7156-7224 ft in Ellenburger, topped at 7000 ft.

Cooke County: Two Ellenburger prospects are awaiting production tests. W. F. Russell et al's Gwynn 1, H. Jennings Survey A-531, 6 miles west of Gainesville, entered this Ordovician zone at 1589 ft, with broken saturation 1590-95 ft and 1610-23 ft. Lou Stogner et al's Berry 1, 2 miles north of Rosston, was drilling plugs with spudder from 5½-in at 5810 ft to test oil saturation 5932-6003 ft, having sidetracked junk at 5924 ft before running oil string.

Jack County: Taubert-McKee and Sinclair Prairie's Boyd 1, recent discovery for the Post Oak geophysical prospect, flowed 226 bbls oil on 9-hour test

through ½-in choke, then after 16-hour shutdown water made its appearance in testing 25.6 bbls oil and 38 bbls water in 3 hours on ½-in choke. Production is from Ellenburger at 6389-6435 ft. Hole will be plugged back and reacidized. Same partnerships' A. J. Hoefle 1-A, northwest edge of Hoefle pool and first Bend failure for the area, was idle at 5900 ft in dry Ellenburger, topped at 5859 ft.

COMPLETIONS

Archer County: Scotland—Shell's Coleman 3-C, 990 ft out swc lot 1, ATNCL 74, abnd in Mississippian 5396-5697 ft.

Archer County: Wildcat—Bridwell Oil Co.'s Conrady 2, 495 ft from s and 1359 ft from w lines sec 23, blk 4, Clark-Plumb sur, Gunsight 1079-83 ft, abnd 2007 ft.

Clay County: New York City—Shell's Coleman 2-B, 1030 ft from w and 330 ft from s lines sec 25, Calhoun CSL, top Mississippi 6236 ft, Viola 6468 ft, abnd 6509 ft.

Grayson County: Wildcat — Sinclair Prairie's Wheeler 1, 660 ft out nwc n 50-ac of 100-ac tr, Chas. Quillen sur, abnd Ellenburger 3947-4513 ft.

Montague County: Wildcat — Continental's J. F. Yowell 1-S, nec of 79.87-ac lse, sec 8, Limestone CSL, abnd 1239 ft.

Montague County: Benton-Holmes—Jimmie Rogers et al's Agee 1, 150 ft out sec J. Woodruff sur, pump 64 bbls, sand 2824-43 ft, td 3064 ft.

Montague County: Clingingsmith—Sinclair-Prairie's McCall 2, 330 ft out sec ne 40-ac blk 150, J. Olibarri sur, top Bend 5934 ft, abnd 6250 ft.

Throckmorton County—Freeland et al's Will McKeichan 2, C. W. Marques sur A-236, abnd 680 ft.

Throckmorton County: Wildcat—J. L. Hart et al's Mathews-Reynolds 1, nec Blk 128, Comanche Indian Reservation, abnd 1130 ft.

Wichita County: K-M-A Ellenburger—J. A. Chapman-Ed McFarlin's Mangold 5-E, 330 ft from n and 430 ft from w lines blk 36, P. Castleman sur, flow 1056 bbls ¾-in, acid 3000 gals Ellenburger 4268-4343 ft.

Young County—Martin & Harvey's Gragg 12, A. Rohus sur A-240, pump 2 bbls, shot 5 qts 742-50 ft.

Young County: Wildcat—R. J. Watson et al's Routon 1, nec s½ TE&L 265, abnd 750 ft.

GAS INPUT WELL

Young County: Martin-Harvey—E. R. Riggs' Allison-Bloodworth 1, 330 ft from w and on s line TE&L 151, sand 866-79 ft, td 883 ft.

OLD WELLS DEEPENED

Wilbarger County: Consolidated — Consolidated's Waggoner 7-CC, 1040 ft from s and 990 ft from e H&TC 36, blk 6, otd 3761 ft, Bend saturation 3985-4083 ft, jkd.

Young County—Bernson & O'Rourke's Harlan 5, TE&L sec 1972, otd 3214 ft, flow 374 bbls ¾-in, 4016-20 ft.

WILDCAT STARTS

Archer County—Geo. W. Cooper et al's C. Knight 1, 330 ft out nec w½ blk 69, KWVFL sur, 1 mi w Holliday, Ordovician lcn.

Phillips Pet. Co.'s J. T. Williams-Wildora 1, 330 ft out nec sw 260-ac H&TS 8, blk 4, 4 mi s by w Dundee, lcn 3400-ft test.

Waldo E. Stephens et al's H. B. Adae 2, sw ne sw 8, Palo Pinto CSL sur, 1¼ mi nw Dundee, lcn 2000-ft test.

Montague County—Jerry C. Hawkins et al's Lowrie 1, 1400 ft from n and 660 ft from w lines TE&L 2824 ft, 4½ miles nw Bowie, lcn Ordovician test.

Wichita County—C. F. Schram et al's E. P. Thompson 1, 700 ft out nwc of L. Lapoleum sur A-728, 5 mi se Wichita Falls, lcn.

Ted A. Norwood et al's W. L. Doyle 1, 1405 ft from s and 1450 ft from w lines Geo. Wheelwright sur A-320, lcn.

TEXAS PANHANDLE

COMPLETIONS

Carson County—Continental's S. B. Burnett 3-E, se I&GN 117, blk 4, elev 3208 ft, abnd 3357 ft.

Gray County—Coronado Oil Co.'s Davidson 5-A, H&GN 87, blk B-2, pump 110 bbls, shot 195 qts 3065-3135 ft.

Magnolia's Fee (Tr. 227) 50, pump 201 bbls, shot 400 qts 2918-3011 ft.

Phillips' Castleberry-Pan 11, I&GN 126, blk 3, pump 303 bbls, shot 240 qts 3240-87 ft.

Phillips' Davidson 5, H&GN 86, blk B-2, pump 212 bbls, shot 180 qts 3057-98 ft.

Hutchinson County—J. E. Crosbie, Inc.'s Pitts 47, T.C. Ry. 7, blk M-21, pump 326 bbls, shot 465 qts 2770-2870 ft.

Dolomite Prod. Co.'s Perkins 9, J. McDaniels sur, pump 174 bbls, shot 130 qts 2970-3071 ft.

Gooden & Parton's Hodges 2, H&OB 14, blk X-02, pump 20 bbls, shot 278 qts 2995-3110 ft, td 3122 ft.

OLD WELL DEEPENED

Gray County—Stanolind's (was Manston) Sullivan 3, I&GN 136, blk 3, otd 3258 ft, pump 50 bbls, td 3286 ft.

East Texas

Second Test at Concord Finds Marker High

Second test for Concord pool, Anderson County, high on first marker. Wood County wildcat finds water in Woodbine.

Anderson County: Magnolia's Kelly 1, 1500 ft southwest of its Concord pool discovery, drilling 3680 ft having logged Pecan Chalk 3515-3635 ft, elevation 552 ft, being 9 ft high on top of chalk. The 12.2-gravity oil pumped from the discovery is supplying fuel for the new operation.

Wood County: Joe Papadakis et al's Lucy Old 1, originally abandoned in Eagleford at 5301 ft, deepened to 6110 ft with water in Woodbine at 5528-48 ft. Amerada's Kennemer 1, projected Lower Trinity wildcat, drilling 2900 ft.

COMPLETIONS

Robertson County: Wildcat—Kirby-F. M. Morrison-Whit Moore's Martin 1, 467 ft out n cor W. R. Cox sur, ½ mi e of Easterly, Wilcox 275 ft, Midway 1748 ft, abnd 2620 ft.

Smith County: Chapel Hill—Delta Drl. Co.'s Walton-Humble 1, 660 ft from n and 708 ft from w lines 105.14-ac tr, S. Box sur, flow 203 bbls oil natural ¼-in, Pettit perf 8060-74 ft, td 8275 ft.

Wood County: Hawkins—Humble's Kay 7, 467 ft from w and 1440 ft n of m/n/s lines 330.31-ac tr, B. N. Hampton sur, flow 525 bbls ¼-in, Woodbine perf, td 4703 ft.

Humble's S. H. Moore 2, 492 ft from s and 467 ft from w 140.91-ac tr, Jas. Pollock sur, flow 417 bbls ¼-in, Woodbine perf 4686-97 and 4715-21 ft, td 4780 ft.

Humble's N. M. Shamburger 4, sec 156.45-ac tr, Jas. Pollock sur, flow 498 bbls ¼-in, perf 4792-98 and 4859-64 ft, td 4880 ft.

WILDCAT STARTS

Ellis County—Pat Stewart & Cresswell's L. H. McClain 1, 660 ft out nec 100-ac tr, A. S. Smith sur, 3½ mi sw Palmer, lcn.

Trinity County—Magnolia's Cameron Est 1 (5000-ac lse), 600 ft out swc lot 90, Henry Bond sur, 3 mi se Glendale, mim deep test.

Southwest Texas

Another Increase In Wildcat Work

Although hit by a strict proration due to lack of transportation, Southwest Texas continues to be an active wildcatting spot. The past week saw a greater increase in new activity than at any time since the first of the year.

Jackson County: Gulfboard Oil Corp. et al's Harmon 1, se of Ganado, flowed 4½ bbls of 28.8-gr oil per hour through 5/32-in choke with 400 lbs tubing pressure. Apparently new field.

SOUTHWEST TEXAS

COMPLETIONS

Duval County: Driscoll—Continental's Driscoll 78-A, sur 447, 321.21 bbls 31.3-gr, ¼-in, 400 lbs tp, 1080 lbs cp, gas/oil ratio 330/1, perf 3368-89 ft, td 3390 ft.

Duval County: Wildcats — Texas' H. E. Timon 1, sur 38, 6 mi n Freer, abnd 2707 ft.

G. I. Warren's C. Driscoll 2, sec 49, 2 mi w Driscoll field, abnd 3983 ft.

Jim Hogg County: Colorado — Humble's King-Colorado 64-B, Las Moretas gr, 154.42 bbls 46.5-gr, 3/16-in, 200 lbs tp and cp, gas/oil ratio 205/1, sand 3092 ft, 4½-in 3088 ft, td 3101 ft.

Sun's East 3-B, Las Moretas gr, pump 12 bbls 46-gr, 8% sw, sand 2825-27 ft, td 2830 ft.

Starr County: Rincon—Continental's Slick 66-B, sec 232, 228 bbls 42.6-gr, 12/64-in, 580 lbs tp, 720 lbs cp, gas/oil ratio 632/1, perf 4086-94 ft and 4101-22 ft, td 4155 ft.

Starr County: Sun—Humble's Barrera 1, Los Retachez gr, 133 bbls 45.6-gr, ⅛-in, 780 lbs tp, 910 lbs cp, gas/oil ratio 600/1, sand 4673 ft, 5½-in 4682 ft, td 4690 ft.

Sun's C. L. de Garza 2, La Sal Colorado gr, abnd 4449 ft.

Starr County: Yturria—Sun's M. Samano 1, se outpost, tr 79, sh 16, junked with ds stuck 4883 ft.

WILDCAT STARTS

Duval County—W. H. McGuffin's E. C. Gallagher 1, center blk 7, sec 14, 15 mi nw San Diego, lcn 3500-ft test.

Guy I. Warren's Driscoll 3, 660 ft n and w lines sec 56, Sweden Farm Lots, nw Realitos, sp 4000-ft test.

McMullen County—Magnolia's J. E. Murphy 1, 660 ft s, 1980 ft e lines sec 121, 3 mi ne Loma Alta, dr 1900 ft on 3000-ft test.

Webb County—W. H. Holland's J. Neal 1, 660 ft n and w lines of sur 1008, 2 mi e Oilton, loc for 2015-ft test.

SOUTH CENTRAL TEXAS

COMPLETIONS

Caldwell County: Bee Creek—R. R. Ogden's Talley 14, W. C. Swearingen sur, 18.41 bbls 36-gr, 10% sw on pump, acidized 2000 gals, Dale lime, streaks serpentine, oil show 2117-53 ft, set 5½-in 2122 ft, slotted pipe 2090-2122 ft, td 2286 ft.

Caldwell County: Wildcats—Ogden & Riddle's Copeland 1, N. Kelley sur, 4 mi se Dale, top Dale 2025 ft, Austin ch 2330 ft, Buda 2366 ft, abnd 2417 ft.

Ogden & Riddle's Copeland 2, 1320 ft se No. 1, N. Kelley sur, abnd 2275 ft.

C. E. Starr's G. T. Brown 1, W. Fishbaugh sur, 3 mi e Luling, abnd 3284 ft.

Hays County: Wildcat—Lubell Oil Co.'s Howard 1, W. B. Travis sur, 2 mi se Driftwood, standing 800 ft.

LaSalle County: Washburn—Quintana Pet. Co.'s South Texas 11, sur 95, 194.9 bbls 41.1-gr, ¼-in, 100 lbs tp, 40 lbs cp, gas/oil ratio 300/1, sand 5560-71 ft, 5-in 5560 ft, td 5571 ft.

WILDCAT STARTS

LaSalle County — Quintana's Kostroun 1, 1280-ac lse, E. Lane sur 6, 5 mi nw Fowlerton, 8500-ft test.

Milam County—Fritz Fuchs' J. Clements 1, 660 ft s and e lines n ½ of 100-ac lse, J. J. Liendo sur, 3 mi e Thorndale, lcn 1650-ft test.

Williamson County—H. G. Albert's M. Kuhn 1, 80-ac lse, P. Coursey sur, 3 mi s Taylor, lcn 900-ft test.

H. C. LeFors' Kutzackbach 1, 660 ft s and e lines 160-ac lse, P. J. Mahon sur, 8 mi ne Taylor, lcn 800-ft test.

J. E. Schultz' Carl Almquist 1, 660 ft s and e lines 108.45-ac lse, Silas Palmer sur, 4 mi ne Hutto, lcn 1000-ft test.

LOWER GULF COAST

COMPLETIONS

Bee County: Wildcat—Magnolia's Buckner 1, T. Simmons sur, lcn abnd.

Calhoun County: Duck Bay — Stanolind's Welder 5-A, E. Hidalgo gr, 6900 ft nw outpost, abnd 6100 ft.

Jackson County: Ganado—Humble's Branch 4, sec 2, ¼ mi w prod, 108.2 bbls 42.7-gr, 50% sw, ⅛-in, 860 lbs tp, 1025 lbs cp, gas/oil ratio 636/1, sand 6630 ft, 5½-in 6621 ft, td 6635 ft.

Jackson County: Lolita—Skelly's M. Mitchell 4-B, S. F. Austin Lge, 165.2 bbls 26.1-gr, 5/32-in, 460 lbs tp, 625 lbs cp, gas/oil ratio 284/1, perf 5286-92 ft, td 5950 ft.

Jackson County: Maurbo — Humble's Edwards 2, A. M. Clare Lge, 71.8 bbls 26-gr, ⅛-in, 400 lbs tp, cas sealed, gas/oil ratio 344/1, perf 5218-25 ft, td 5232 ft.

Stanolind's A. E. Westhoff 1, A. M. Clare lge, 160 bbls 25.2-gr, ⅛-in, 625 lbs tp, 1000 lbs cp, gas/oil ratio 394/1, perf 5207-12 and 5216-22 ft, sd 5200 ft, td 5243 ft.

Jackson County: N. LaWard — **Hewit &** Dougherty's B. O. Lawrence 2, blk 27, 85 bbls 25-gr, 14% sw, ½-in, 50 lbs tp, 250 lbs cp, gas/oil ratio 563/1, perf 5221-28 ft, sand 5215 ft, td 5226 ft.

Magnolia's Four-Way 1-A, blk 29, 91 bbls 25-gr, 2-in tubing, 60 lbs tp, 350 lbs cp, gas/oil ratio 150/1, perf 5205-21 ft, td 5230 ft.

Magnolia's Gordin 19, blk 4, 20,000 gas, 1750 lbs rp, perf 5205-17 ft, td 5225 ft.

Phillips' J. Johnson 4, blk 151, 97.2 bbls 27.1-gr, 7/64-in, 220 lbs tp, 600 lbs cp, gas/oil ratio 161/1, perf 5213-23 ft, td 5270 ft.

Jackson County: West Ganado—Pure's E. T. Cravens 6, Menefee sur, 76 bbls 24.6-gr, 8/64-in ch, 420 lbs tp, cas sealed, perf 4748-65 ft, td 4850 ft.

Jim Wells County: Orange Grove—Chass Prod. Co. et al's E. Schrade 1, sec 6, 192 bbls 31.6-gr, 3/16-in, 320 lbs tp, 1650 lbs cp, gas/oil ratio 361/1, perf 4906-11 ft, td 4911 ft.

Jim Wells County: Wildcat—Humble's C. Muil 1, lot 88, sur 60, 7 mi sw Alice, abnd 8115 ft in Yegua.

Kleberg County: Stratton—Humble's King-Paso Ancho 13, Luciano Rivas gr, se outpost, 155.5 bbls 43.6-gr, ⅛-in, 950 lbs tp, 1200 lbs cp, gas/oil ratio 701/1, sand 6600 ft, 5½-in 6612 ft, td 6650 ft.

Refugio County: Wildcat—Hewit & Dougherty's Rooke 16, blk 26, sub C, 1½ mi n Rooke field, abnd 7150 ft.

Victoria County: Cologne — Catahoula Oil Co.'s E. C. Dietzel 1, blk 29, 94 bbls 25.3-gr, 20% sw, 7/64-in, 1000 lbs tp, 1610 lbs cp, gas/oil ratio 503/1, perf 4829-32 ft, sand 4826 ft, td 4848 ft.

WILDCAT STARTS

Brooks County—M. P. Evans' F. Lopez de Vela 1, 660 ft n and w lines sh 15, J. Longoria gr, 15 mi w Encino, lcn 1300-ft test.

DeWitt County—Tide Water et al's F. G. Gips 1, 2427 ft se'ly se and 760 ft ne lines

512.1-ac lse, W. A. Moore sur, 11 mi sw Yorktown, lcn 8500-ft Wilcox test.

Hidalgo County—Baldridge & King's D. S. de Perez 1, 467 ft se MP Ry, 467 ft e of w l of 40-ac unit, L. Ejidos gr, 9 mi se Mission, lcn 7000-ft test.

Jackson County—Moore & Ahern's J. M. Heard 1, 660 ft n l, 4895 ft w lines 1000-ac lse, T. J. Winston sur, 5 mi ne Ganado, lcn 7000-ft test.

Jim Wells County — Kilgore Developers' Stratman, 660 ft ne and se lines 240-ac lse, Casa Blanca gr, 3 mi e Orange Grove, set sur cas on 6000-ft test.

Shell's A. L. Jones 1, 660 ft s and e lines lots 19 & 20, sec 29, Haldeman sub, between Seeligson and Blucher fields, lcn 7500-ft test.

Live Oak County—Humphries & Hotchkin's E. C. Wade 2, 3633 ft n, 3490 ft w lines 1142.74-ac lse, J. Somes sur, 3 mi ne Three Rivers, mi 2400-ft test.

Nueces County—Guy I. Warren et al's Clara Driscoll 1-A, 660 ft s and w lines of blk 2, Hunter sub, 3 mi ne Robstown, sp on 7000 ft test.

Texas Gulf Coast

Deeper Wilcox Sand Opened in Fred Area

New producing horizon opened in Fred field, Wilcox sand; semi-wildcat in Chocolate Bayou area testing; new wildcats projected.

Tyler County: Stanolind Oil & Gas Co. has completed a second well to open a new deep sand at Fred. Perforated at 8612-22 ft in Wilcox, about 500 ft lower than the discovery producer, the well flowed 159 bbls through 3/16-in choke in 12 hours, showing 1200 pounds pressure on casing. Tests in perforations at 8600-07 ft, and 8614-37 ft showed oil and salt water. Another test at 8600-08 ft showed salt water, while the discovery sand, topped at 8193 ft, was not tested.

In the Ramer Island area of Tyler County, American Republics and Houston are making further tests on Cushing Fee 2, second well in the Cockfield sand field. Operators have been swabbing around 5425 ft without results. Originally drilled to Wilcox at 8453 ft, the hole was plugged back and redrilled to Cockfield.

Brazoria County: Stanolind is reported testing Houston Farms 1, semi-wildcat on northwest side of the deep Chocolate Bayou field. Total depth is 11,803 ft, deepest well in the field, but exact depth of perforations has not been released. Sufficient sands to assure a producer are believed to have been cored. On the north side of the field, Phillips is preparing to drill Andrau 1, one mile from production.

COMPLETIONS

Chambers County: Fig Ridge—Sun's Pipkin 2, 500 ft fr w, 1787 fr nl HTB 96, perf 8500-60 ft, flow 685 bbls, ¼-in, tp 1250, cp 1325, td 8570 ft.

Chambers County: Seabreeze—Sun's Acom 6, 467 ft fr s, 1206 ft fr el sec 103, perf 8450-77 ft, flow 817 bbls, ¼-in, tp 1440, cp 1500, gor 520-1, td 8489 ft.

Harris County: Wildcat—Atlantic's Cohn 1, 248-ac lse Meredith Duncan sur, west of Esperson Dome, attempted blowout 8521 ft, stuck tubing, abnd 9505 ft.

Matagorda County: Markham — Martin Thompson's Sisk 1, 50 ft fr w, 100 ft fr nl 10-ac tr, William Hadden sur, flow 66 bbls, ⅛-in, tp 320, cp 225, td 3165 ft.

Wharton County: Withers—F. W. Michaux's Pierce Est. 33-A, 5053 ft fr sel Charles Howard sur 181, flow 125 bbls 10/64-in, tp 375, cp 400, gor 410-1, td 5360 ft.

F. W. Michaux's Pierce Est. 41-A, 3187 ft fr sel Charles Howard sur, flow 140 bbls, 10/64-in, tp 675, cp 425, gor 246-1 td 5552 ft.

WILDCAT STARTS

Montgomery County — Superior's Frost 1, East Lake Creek area, 600 ft fr most w'ly w, 800 ft fr s'ly nl of 1896-ac tr, A Hodge sur, lcn 12,000-ft test.

Wharton County—H. C. Cockburn's Moers 1, Lane City area, 330 ft fr el, 660 ft fr sl 40-ac unit, Charles Hudson sur, lcn 7000-ft test.

Louisiana Gulf Coast

Open New Deep Sand In West Gueydan Field

New producing horizon at West Gueydan; wildcatting shows sharp gain with new locations projected for immediate drilling.

Vermilion Parish—Pure Oil Co. is cleaning up mechanical trouble and testing Acadia-Vermilion Irrigation Co. 2 to open a new deep sand on north flank West Gueydan field. The producer was first tested at 10,792-98½ ft in Miocene, flowing 49 bbls 34.9-gr oil hourly through ¼-in choke. Salt water broke in and operators were squeezing perforations to test a little higher when pipe stuck. This is the second sand for the field, the discovery sand being at 7137 ft. The field is circled with five dry holes and has six producers.

Wildcats—Several deep wildcat tests have been projected within the past 10 days. Gulf is preparing to drill on the Krotz Springs prospect in St. Landry Parish. The location is due to be made in sec 21-6s-7e, three miles southwest of Krotz Springs townsite which is on the Atchafalaya River between St. Landry and Pointe Coupee parishes. Gulf recently extended its leases in the area for three years.

In the same parish Sun made location for Boagni Estate 1 near Opelousas, and a third location for the parish was staked by Stanolind on the Palmetto prospect, all deep tests.

St. Mary Parish—Fifteen Oil Co. is expected to stake location for a second deep test near its recent sand discovery on the flank of Charenton field. The company opened production from the 9200-ft level in South Coast Corporation 2.

Extensions—Texas Co. is drilling at shallow depth in Rojas 1, wildcat mile east of LaFitte production, Jefferson Parish. In the West Mermentau area, Jefferson Davis Parish, H. M. Naylor Oil Co. has spudded Acadia Development 2, wildcat projected to 12,000 ft.

COMPLETIONS

Acadia Parish: Ritchie—Bering Oil Co.'s McManus 2, 368 ft e, 999 s nw c 21-7s-1w, sand 3499-3507 ft, flow 113 bbls 10/64-in, 3508 ft.

Calcasieu Parish: Hayes—Gulf's Calcasieu National 2, 330 ft s, 1130 e nwc se sw 18-11s-5w, perf 11,660-70 ft, flow 61 bbls oil, 4,000,000 gas 3/16-in, td 11,784 ft.

Rapides Parish: Wildcat—Roland S. Bond's O'Neal Est. 1, c sw nw 20, abnd 6006 ft.

St. Martin Parish: Happytown—Markley-Bankhead's Iberville 1, 200 ft s, 225 w nec 31-11s-10e, abnd 11,009 ft.

St. Martin Parish: Bayou Sale—Humble's Canal Bank 1, 4574 ft sw'ly alg sel sec 15 fr extreme e cor, thence at ra nw'ly 2080 ft in 16-16s-9e, perf 10,117-125 ft, flow 7 bbls hourly ⅛-in, tp 1150, td 10,549 ft.

Terrebonne Parish: Wildcat—Pan American's LaTerre Land Co. 1, South Houma area, 1971 ft e & 1978 ft n of sw cor 67-18s-18e, abnd 10,502 ft.

Terrebonne Parish: Wildcat — Texas Co.'s Pointe Au Fer 1-419, Pointe Au Fer area, sec 35-20s-11e, perf 5608-30 ft, 1,000,000 gas 12/64-in, opens new gas sand, td 9264 ft.

WILDCAT STARTS

St. James Parish—Cities Service's Karstein 1, 500 ft e nwc 43-13s-16e, lcn Wilcox test.

St. Landry Parish—Sun's Boagni Est. 1, start se cor sec 40-5s-4e, go 5058 ft sw'ly alg sel sec 40 on line of T-5s and 6s-4e, thence nw'ly at ra to sl for 55 ft in 40-6s-4e, company rig, lcn.

No More Bathtubs!

We may as well get used to the thought of going back to a spit bath on Saturday nights. No more tubs in which to make gin and whoopee; no more mail boxes in which to get bills; no more fountain pens with which to sign checks; no more plates on which to bake good old gooseberry pies; no more machines on which to register cash receipts, if any; not even any more theatre marquees, whatever that is! The flies will swarm for lack of traps, we'll twiddle our thumbs when we might be pleasure boating, Oscar will have to wring the mop by hand and street lights (poor city fathers!) will have to do without standards unless made of gold or silver. Maybe, in the oil industry, we aren't so bad off after all. Armed with a preference rating we can get something every now and then, while the poor fellow without a fly trap will simply have to brush 'em off for the duration! What was it Sherman said about war?

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North Louisiana

Haynesville Continued Most Active Area

Five new wells, two new locations at Haynesville; new wildcat locations for Bienville and Caddo parishes.

Haynesville: Field added five new Pettit lime oil wells and had two locations during the week, maintaining this as most active North Louisiana area.

Bienville Parish: Arkansas Fuel Oil Co. staked location for a Travis Peak wildcat, E. W. Merritt 1, SW SW 13-17n-7w.

Caddo Parish: Steve Reele staked wildcat location for Fry 1, 1980 ft south and west NEc 21-19n-16w.

COMPLETIONS

Caddo Parish: Pine Island, Vivian—A. Paul Gilbert, Thigpen-Herold 1, 2970 s, 330 e nwc 35-22n-16w, pump 36 bbls, 2465 ft.

Catahoula Parish: Willow Lake—Phillips' Womack 4, sw se 1-6n-6e, abnd 6472 ft.

Claiborne Parish: Haynesville—Blackwell O&G Co.'s J. T. Waller 1, ne nw 23-23n-8w, flow 120 bbls hourly, ¼-in, 5315 ft.

Blackwell O&G Co.'s Camp 1, sw se 10-23n-8w, flow 50 bbls hr, 5418 ft.

Mid-States Oil Corp.'s Akin et al 1, ne ne 27-23n-8w, flow 28 bbls hr, 5520 ft.

Ohio's J. W. Taylor B-1, Acct 16, flow 40 bbls hr, ⅛-in, 5350 ft.

Ohio's S. T. Hunt 1, Acct P-3, flow 30 bbls hr, 5475 ft.

LaSalle Parish: Wildcat—Carter's Catahoula 3300 ft, s & e nwc 36-7n-3e, abnd 5270 ft.

LaSalle Parish: Little Creek—Ark. Fuel Oil Co.'s Taylor 4, sw ne 25-9n-1e, pump 108 bbls, 2510 ft.

LaSalle Parish: Trout—H. L. Hunt's Goodpine F-90, nw se 25-8n-2e, pump 290 bbls, 3900 ft.

Sabine Parish: Wildcat—J. A. McDaniel et al's Louisiana Long Leaf 1, ne se 28-6n-12w, abnd 2500 ft.

WILDCAT STARTS

Bienville Parish—Ark. Fuel Oil Co.'s Merritt 1, 1638 ft e & 1663 ft n swc 13-17n-7w, rig.

Caddo Parish—Steve Reele's Fly 1, 1980 ft s & 660 ft w nec 21-19n-16w, rig.

The OIL WEEKLY'S TRADING POST

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Trading Post Section, THE OIL WEEKLY
P. O. Box 2608 Houston, Texas

Arkansas

Operations Resumed As Floods Recede

Operations at Midway and other fields, affected by high water, resume; Macedonia test shows distillate in Lower Marine.

Midway: High water having receded, operations have resumed at Midway, Lafayette County, and other South Arkansas fields. Six drilling operations, including one testing at Midway, and another has rig up.

Macedonia: McAlester and Atlantic's Nipper 1, SW SE 20-18-21, Macedonia, Columbia County, showed one joint of distillate-cut oil in drill-stem test in Lower Marine (Cotton Valley) at 7193-7219 ft, and prepared to drill ahead to Smackover lime, regular producing horizon of field. Several previous tests at Macedonia have shown oil in Lower Marine. Five other tests drilling at Macedonia.

McKamie: On the extreme south side of McKamie, Lafayette County, Carter Oil Co. staked location for another 9000-ft test, C SW 32-17-23. Carter has one other operation drilling at McKamie, only operations there at present.

WILDCAT START

Logan County—Ozark Nat. Gas Co.'s W. C. Davis 1, ne sw 7-8n-26, rig.

Mississippi

Chickasaw County Wildcat Shows Salt Water

Chickasaw County wildcat shows salt water in first test of Fort Payne, to test higher up; Sharpsburg - Pickens test shows evidence of fault; 13 more wells at Tinsley Dome show salt water.

Chickasaw County: Carter Oil Co.'s Abernathy 1, SW SW 29-12s-5e, drilled to 3494 ft and plugged back to 3138 ft, with 5-in cemented at 3105 ft, swabbed salt water and prepared to perforate at 2895 ft. First test was in the Fort Payne. Cypress section from 2430-45 ft varied from 6 to 13 percent porosity, with permeability varying from 3 to 213 millidarcy, which averaged 65 horizontal and 60 vertical. The Fort Payne from 3111 to 3115 ft averaged 22.5 percent porosity but zero permeability. Oil saturation was 24.85 percent and water 48.62 percent.

Sharpsburg-Pickens: Phillips Petroleum Co.'s Whitworth 3, SW NE 4-11n-3e, Madison County, missed the regular

pay horizon and is drilling ahead. It logged a section almost identical with the discovery well at Pickens, three miles away; topped chalk 5 ft higher than the same company's Whitworth 1, but the chalk thickened and Eutaw was logged at 4831 ft, 53 ft low. Present test is the first one at Sharpsburg-Pickens to show evidence of faulting. This location was drilled with the idea of making a salt water disposal well, if it proves dry.

Tinsley Dome: Thirteen more wells at Tinsley Dome, Yazoo County, showed salt water encroachment during April, making 114 wells in the field showing water. The field has 338 oil producers.

MISSISSIPPI

COMPLETIONS

Harrison County: Wildcat—Humble's Dantzler 1, se ne 33-4s-11w, elev 160 ft, chalk 6050 ft, abnd 8974 ft.

Yazoo County: Wildcat—W. O. Allen & Roy Lee's Pickett 1, c nw nw 32-11n-2e, elev 297 ft, Midway 3850 ft, Selma 4693 ft, Eutaw 5653 ft, Tallahata 1349 ft, Wilcox 1688 ft, junked 5987 ft.

California

Important Heavy Oil Strike in Kern County

Discovery of important new source of heavy oil in San Joaquin Valley indicated in formation test on Shell's Williams 45-6, wildcat in Belridge area, Kern County which flowed 2 hours at 1725 barrels daily rate; 16.4-gr oil. Bottom is at 2340 ft but extent of sand penetration not yet known.

Kern County: After coring some 20 ft of barren gray sand and shale, believed to be Vedder-Walker contact, in interval 6744-6764 ft, J. Paul Getty has abandoned Mattson 1 semi-wildcat, 6-30-29, Edison area, after carrying to 6764 ft. Wicker zone was topped at approximately 4212 ft and base at 4315 ft and was predominately shale with thin streaks of oil sand.

Los Angeles County: Shell's Mission 2-1, wildcat in 25-3-16, Aliso Canyon-San Fernando area, has been abandoned after drilling to 6978 ft. Water and trace of oil was swabbed from interval 1220-2126 ft. No showings of importance were encountered in lower measures.

Orange County: A test to approximately 8000 ft is being planned by Frankley-Harriman, Inc., in the Southeast Huntington Beach area where leases have been taken on 470 acres including the Surf property on the flats, near old shallow producers drilled by Standard Oil Co. in the early development of the area.

COMPLETIONS

Fresno County: Kettleman North Dome—Knda's 321-30J, 657 ft s, 2016 e nw cor 30-21-27, flow 136 bbls 41.8-gr, 1-in, 290 ft perf 10,956 ft, Temblor 7597 ft, McAdams 10,530 ft, td 10,960 ft.

Fresno County: Riverdale area—General's No. 45-21, 330 ft s, 330 w center 21-17-19, abnd 8267 ft.

Kern County: Buena Vista Hills—Standard's 103-27B, 2292 ft s, 2062 w ne cor 27-31-23, pump 45 bbls, 284 ft perf 2968 ft, td 2970 ft.

Kern County: Richgrove-Jasmine-Delano area—Termo Co.'s Salca 1, 330 ft n, 2310 w se cor 1-25-27, abnd 1828 ft.

Los Angeles County: Puente Hills—Axis Petroleum Corp.'s Tanberg 1, 247 ft ely on C/L La Mesita from C/L Turnbull Canyon Rd. thence 120 ft nly at ra, pump 30 bbls, perf 3330-3440 ft, td 4189 ft, pb 3440 ft; Miocene 1960 ft, oil sand 2887 ft.

Orange County: Huntington Beach—Southwest Explo. Co.'s State 46, 135 ft nly & 2597 ft wly C/Ls 23rd & Ocean, flow 387 bbls, 822 ft perf 5584 ft, td 5594 ft.

Santa Barbara County: Santa Maria Valley—Union's Bradley Lands 2-3, 990 ft s, 1004 e n¼ cor 36-10-34, pumper, no est, 474 ft perf 5454 ft, td 5456 ft; Miocene 4810 ft.

Ventura County: Piru—Pacific Western's Temescal 11, 1380 ft s, 1511 e int. n line 4-4-18 & w line Temescal ppty, pump 200 bbls 18.6-gr, perf 2779-2982, 3177-3262 ft.

WILDCAT STARTS

Orange County—Texas Co.'s Buena Park 4-E, 36-3-11, foundation, Anaheim-Buena Park area.

Ventura County—L. H. Phillips & D. H. Nichols' No. 1, sec 33-4-18, lcn, Eureka Canyon area.

Rocky Mountain Area

Three Important Wildcat Tests Get Underway

Carter Oil Co. locates North Dakota wildcat long expected. Two other important Rocky Mountain wildcats start.

North Dakota: Carter's Semling 1, C SE SE 18-141n-81w, Burleigh County, is moving in for a test to 7500 ft. For past three years majors, led by Carter have leased upwards of 5 million acres extending through North and South Dakota. Carter test has been long anticipated and will be watched with interest. Wildcat north of town of Wogansport.

Antelope Gap: General Petroleum Corp. is drilling water well for G-34, SW SE NW 15-24n-66w, Antelope Gap structure, Platte County, Wyo. Area had been studied by gravity meter and seismograph survey. Objective Tensleep at around 4500 ft.

Sherrard Dome: Sinclair Wyoming Oil Co. is moving over to Anderson 1, SE SE SE 14-25n-89w, Sherrard Dome, Wyoming, for another deep Tensleep test after completing Carter 1 in the Dakota series for gas, new field discovery. Carter 1 has water in the Tensleep.

MONTANA

COMPLETIONS

Big Horn County: Hardin—Big Horn Oil & & Gas Co.'s Fee 1, n ne nw 20-1s-33e, Frontier 663-81 ft, 690 ft td, 0.060 ft gas, 105 lbs rp.

Glacier County: Cut Bank—Glacier Production Co.'s Bonnet 10, csl nw ne 4-32n-5w, 62 bbls flowing, 2693 ft.

Glacier's Mueller 4, c se nw 7-33n-5w, 52 bbls flowing, 2921 ft.

Texas Co.'s Miller 3, c sw se 29-33n-5w, 81 bbls flowing, 2957 ft.

Toole County: Kevin-Sunburst—J. H. Agen's Goeddertz 20, se nw sw 23-35n-3w, abnd 1717 ft.

Coolidge & Coolidge's State 10-A, sw nw ne 36-36n-2w, 12 bbls flowing, 1661 ft.

Rimrock Oil Co.'s Schmidt 9, c n 1 sw nw 29-35n-3w, 5 bbls pumping, 1817 ft.

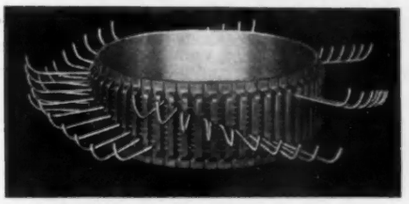
Michigan

Osceola Wildcat Has Indications of New Pool

Fourth new field for Michigan this year looms with Sun Oil Co.'s Arndt 1, S½ SW SW 23-18n-8w, Osceola County, showing 2500 ft oil natural in 7 hrs and swabbing average 22 bbls 44.6-gravity oil per day on a three-day test. This wildcat logged Dundee 3767 ft and bottomed at 3778 ft. It will be acidized. Test in center of a long-held Sun block where company has carried on both core, deep drilling and some seismograph work. Is is 14 miles east Reed City field and 22 miles northwest of Sherman pool.

Turner Petroleum Corporation killed Cavanagh 1, N½ SE NW 14-21n-7w,

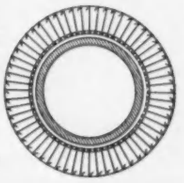
Center
YOUR CASING
with
B and W, Inc.
WALL CLEANING GUIDES



AVERAGE THICKNESS of the cement sheath around the casing in an oil well is only 1½", but even this is theoretical, because a very slight angle of inclination throws the casing off center and may reduce cement to ½"—or less—perhaps to zero!

LIKE A PENDULUM, an oil well casing is hard to sway near the top, but progressively **EASIER** to sway further down the hole. Thus a minor directional change near bottom **will cause casing to lie against one side of the hole. RESULT:** Faulty cementing.

THE ANSWER: The low unit cost of **B and W Wall Cleaning Guides** permits usage of a series of Guides carrying multiple spring wires, placed at intervals, to center the casing throughout the **ENTIRE** section.



IN ADDITION — and equally important — **B and W Guides remove the mud filter cake from the wall of the hole just before and as the cement is placed, assuring CONTACT between the cement and formation.**

WRITE FOR BULLETIN 102

BRUCE BARKIS — B and W, Inc. — KENNETH WRIGHT
Well Completion Specialists
Makers of
B and W Wall Cleaning Guides
Gulf Coast & Foreign Distributors of
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WHITE-PLAZA HOTELS
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MORE MEN IN THE DRILLING-PRODUCING INDUSTRY SUBSCRIBE TO
THE OIL WEEKLY
THAN TO ANY OTHER OIL PAPER.
BE SURE TO RENEW YOUR SUBSCRIPTION PROMPTLY

Missaukee County, by salt water injection, packed off Dundee with gravel and cemented 5-3/16-in at 3935 ft. Drilled out, it started to swab between 5 and 9 bbls of oil per hr and will be acidized for final completion. Having flowed 456 bbls through open hole at 3945 ft and through 43 ft of cavings, this wildcat is regarded as a pool opener. Pure, Gulf and Ohio active on offsets.

Wildcats: Alvin H. Weber resumed drilling on State F-1, NW SW NW 33-24n-2e, Ogemaw County, setting 925 ft 10-in through drift with rotary and now standardizing. First activity in Rose City area since last summer and first for Weber since sale of his Reed City, West Branch, and other properties to Ohio Oil Company last summer.

COMPLETIONS

Allegan County: Wildcat — Clapsaddle & Harris' Siporia 1, nw nw se 35-1n-15w, Traverse 1163 ft, abnd 1200 ft.

Arenac County: Adams—Ervin Major's Ellision 1, ne ne nw 27-19n-3e, Dundee 2865-2900 ft, flow 800 bbls 4½ hrs, td 2900 ft.

Barry County: Wildcat — Homer Fulton's Case 1, nw sw ne 9-1n-8w, Traverse 1834 ft, abnd 1882 ft.

Clare County: Headquarters—Pure's Bonninghausen A-1, w½ ne 4-20n-3w, Traverse 3350-90 ft, flow 112 bbls 1st hr, td 3390 ft.

Osceola County: Reed City—Pure's Richards B-2, s½ se nw 19-18n-10w, Monroe 3582-3606 ft, flow 222 bbls 1st hr, td 3608 ft.

Ohio's Riggs 4, s½ sw ne 19-18n-10w, Monroe 3600-09 ft, flow 178 bbls 2 hrs, td 3609 ft.

Gulf's McIntyre 1, n½ sw se 32-18n-10w, Monroe 3543-79 ft, flow 83, 65.62 bbls 3 hrs, td 3579 ft.

Gulf's Bregg 1, n½ nw sw 5-17n-10w, Monroe 3566-3608 ft, swabbed 61 bbls, acid 500 gals, flow 119 bbls 2 hrs, 3608 ft.

Osceola County: Evart—Taggart Bros. Co.'s Swales 6, c sw 26-18n-8w, Stray 1346-76 ft, 275,000 gas, 1376 ft.

Mecosta County: Wildcat — Belvidere Oil Co.'s Hand 1, sw se se 4-13n-9w, Stray 1340 ft, abnd 1356 ft.

Roscommon County: Headquarters—Ohio's State A-5, n½ sw se 33-21n-3w, Traverse 3260-3345 ft, 90 bbls hr, 3345 ft.

Sun's State A-3, n½ se sw 33-21n-3w, Traverse 3300-28 ft, flow 506 bbls 8 hrs, td 3328 ft.

WILDCAT STARTS

Allegan County—W. R. Borough's Trutsch 1, sw sw ne 23-1n-14w, lcn.

Lake County—Franklin Pet. Co.'s Bonninghausen 1, se sw ne 8-22n-8w, lcn.

Eastern States

NEW YORK

COMPLETIONS

Allegany County — Bradley Prod. Corp., Nobles farm, Alma, 10 bbls, Richburg, 1279 ft.

Harris & Buehring, Allen farm, Scio, 8 bbls, Richburg, 1152 ft.

M. W. Reynolds et al, Holtum farm, Scio, 6 bbls, Richburg, 1090 ft.

Hardy & McBride, Garthwaite farm, Alma, 9 bbls, Richburg, 1276 ft.

Marsh Oil Co., Fay farm, Bolivar, 9 bbls, Richburg, 1468 ft.

Bradley Bros., Withey farm, Bolivar, 7 bbls, Richburg, 1369 ft.

P. H. Fuller, Fuller farm, Scio, 8 bbls, Scio, 659 ft.

Carter, Bradley & Streeter, Smith-Gray farm, Clarksville, 7 bbls, Clarksville, 1352 ft.

Max Andrews, Burdick farm, Wirt, 8 bbls, Richburg, 1344 ft.

New York Oil Co., Brown farm, Bolivar, 8 bbls, Waugh-Porter, 1364 ft.

Scott Oil Co., Scott farm, Bolivar, 9 bbls, Waugh-Porter, 1436 ft.

Wightman & Conkling, Wetherby farm, Clarksville, 1429 ft.

INTAKE WELLS

Allegany County — Bradley Prod. Corp., Bascom farm, Alma, Richburg, 1320 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, Richburg, 1059 ft.

Angie C. Tullar No. 10, Mix farm, Bolivar, Richburg, 1533 ft.

Star Oil Co., Neff farm, Wirt, Richburg, 1266 ft.

Messer Oil Corp., Allen farm, Alma, Richburg, 1430 ft.

W. O. Taylor Est., Coyle farm, Alma, Richburg, 1331 ft.

Bradley Prod. Corp., Fitz-Carroll farm, Bolivar, Richburg, 1430 ft.

L. H. Thornton et al, Smith farm, Willing, Fords Brook, 1147 ft.

H. W. Patterson et al, Wright farm, Scio, Scio, 652 ft.

OHIO

COMPLETIONS

Ashland County—Ohio Fuel's Crumlick 1, abnd 2940 ft.

Athens County—Gibson et al, Copeland 2, abnd 1212 ft.

Coshocton County—Shuff & Bucy's Bishop 1, abnd 3217 ft.

Cuyahoga County—Benedum-Trees' Fish 1, 3.13 gas, 1903 ft.

Guernsey County—R. M. Burns' Dutch 1, abnd 1339 ft.

Knox County—W. E. Booth's Cooksey 1, abnd 760 ft.

H. E. Perkins' Engle 1, abnd 2800 ft.

Licking County—Monroe Oil Co., Hughes 10, 5 bbls, 650 ft.

National Drlg. Co.'s Farley 1, 0.2 gas, 2707 ft.

Medina County—R. C. Holmes et al, Hostettler 017k, 5 bbls, 626 ft.

Meigs County—Ohio Fuel's Gardner 1, 4.0 gas, 801 ft.

Monroe County—E. O. Lucas' Bondi 1, abnd 2250 ft.

Morgan County—Marsh et al, Ellis 1, abnd 845 ft.

Crowley et al, Woodyard 1, 0.12 gas, 1444 ft.

Muskingum County—Pure Oil Co.'s Ribble 2, 0.42 gas, 4286 ft.

Perry County—Wittmer Co.'s Wittmer 1, abnd 2852 ft.

Edward Everett Co.'s Dornboroi 1, abnd 2829 ft.

Preston's Thompson, 4, 287 bbls, 3295 ft.

Washington County—John Herlan's Matheny 8, 2 bbls, 2202 ft.

Porter et al's Male 2, 0.2 gas, 1377 ft.

PENNSYLVANIA

COMPLETIONS

Armstrong County—Apollo Gas Co.'s Walker 1, 0.17 gas, 2913 ft.

Clarion County—R. N. Burnham Gas Co.'s Aaron 1, abnd 2478 ft.

Indiana County—Apollo Gas Co.'s Wilson 1, 0.04 gas, 4052 ft.

Washington County—A. C. Phillips et al's Huffman 1, 0.23 gas, 1087 ft.

WEST VIRGINIA

COMPLETIONS

Boone County—Owens, Libby-Owens, Allen & Pryor 35, 0.1 gas, 2470 ft.

Braxton County—Pittsburgh & W. Va. Gas Co.'s Castro 7487, 0.28 gas, 1859 ft.

Calhoun County—Adams & Hunt's Crawford 1, 0.4 gas, 2088 ft.

Gilmer County—Waggoner Gas Co.'s Waggoner 1, 0.03 gas, 2290 ft.

Jackson County — United Fuel Gas Co.'s Green 5052, 11.48 gas, 5242 ft.

Godfrey L. Cabot, Inc.'s Putnam 30, 1.58 gas, 5210 ft.

United Fuel Gas Co.'s Harrison 5076, 1.93 gas, 4940 ft.

Kanawha County—South Penn Nat. Gas Co.'s Wines 3, 2 bbls, 1228 ft.

So. Penn Nat. Gas Co.'s Dodd 2, 0.86 gas, 5319 ft.

Godfrey L. Cabot, Inc.'s Morton 7, 1.19 gas, 4797 ft.

Lincoln County—Brawley-Reid Oil & Gas Co.'s Horse Creek Land Mining Co. 2, 0.41 gas, 3780 ft.

Marshall County—Mfgrs. Light & Heat Co.'s Yoho 3636, abnd 3103 ft.

Upshur County—Cumberland & Allegheny Gas Co.'s Winemiller 317, 0.96 gas, 2274 ft.

See the new feature . . . .

TRADING POST SECTION

on page 58 of this issue

Because of the scarcity of certain types of new equipment and the fact that some concerns may have a surplus of certain items and a serious shortage of others, this **"Used Equipment Forum"** has been inaugurated as a service and aid to operators in locating needed used equipment or in disposing of surpluses that may be needed by others.

Men in the Industry's News

HILAND R. SMITH, who has been field engineer and production superintendent for Federal Oil Company, Dallas, since 1934 has been ordered to duty with the Engineer Corps May 14. He holds a commission as captain. Smith has had 10 years foreign experience in Burma, British North Borneo and the Straights Settlements and is familiar with the country in Burma along the Irrawaddi River to Bhamo, on the China border, one of the jumping off points for transport into China, and head of navigation on the Irrawaddi River.

LEE A. ADAMS, Sinclair Prairie Oil Company scout, reported to Will Rogers field, Oklahoma City, as personnel officer last week. Harry A. Norris, transferred from Wyoming, succeeds him.

W. K. ATCHESON, superintendent, automotive department, The Pure Oil Company, leaves Tulsa May 13 to become a major in the quartermaster corps.

ROSS GAHRING, president of Ross Oil Company, Shawnee, Oklahoma, resumes his commission in the army when he goes to Fort Sill, Oklahoma, May 17. In the first World War Gahring received 13 citations.

GEORGE McLEAN, assistant in the scouting department of Carter Oil Company, Wichita, Kansas, has resigned to join the civilian branch of air service.

PAUL E. TALIAFERRO, attorney for Sunray Oil Company, reports to Jefferson Barracks, Missouri, this week as lieutenant.

JOE CANNON, San Angelo, Texas, operator and consulting geologist, has joined the Navy as a lieutenant, junior grade, in the map interpretation division.

JOHN L. CREED, claim agent for Standard Oil Company of Louisiana, for many years, was transferred from Shreveport last week to Portland, Maine, where he will be operating superintendent for Portland Pipe Line Company.

J. W. STOKER, production superintendent, Sinclair Prairie Oil Company, Shidler, Oklahoma, has been transferred to Cushing district with headquarters at Drumright.

HUMBLE OIL & REFINING COMPANY, Production Department, recently made the following changes in the supervisory forces:

J. E. Clayton, superintendent, was transferred from Lovell Lake repressuring plant to the Katy gas cycling plant as superintendent.

John R. Carroll was appointed plant superintendent in charge of the Lovell Lake repressuring plant.

M. H. Buchanon was transferred from Friendswood to the Galveston Bay as district transportation foreman.

Baker B. Ingram, junior petroleum engineer, was appointed district petroleum engineer in the Wasson district.

Ed Loggings, electrician, was transferred from North Crowley to Paradis as district electrical foreman.

LESTER LeFAVER, district foreman in in Michigan for Gulf Refining Company, has been transferred to Hobbs, New Mexico, effective June 1, and will be replaced by O. L. Stevenson from the Kansas division. A. M. Bell of Tulsa, Gulf Oil Corporation's assistant general superintendent, and Ted Rakestraw, drilling engineer, who had charge of drilling Michigan's record depth well last year, Bateson 1 to 10,447 feet, toured Michigan last week on a inspection of company's properties.

FRANK PHILLIPS has added $50,000 to a fund previously established to provide working capital for college educations for the sons and daughters of Phillips Petroleum Company employes.

VAILE HENRY has been appointed deputy supervisor of District 3, Texas Railroad Commission with headquarters at Houston. Henry, who succeeds O. P. Newman, resigned, has been with the oil and gas division of the commission eight years. He helped organize the tender system in the state.

DAVE P. CARLTON of Humble Oil & Refining Company showed motion pictures taken on a trip to the Dutch East Indies before the Houston Geological Society May 7.

A. J. PENICK has been reelected president of Oil Center Tool Company, Houston, effective April 2, 1942, the board of directors has announced. At the same time the board announced the reelection of H. D. Start as vice president and plant manager. B. V. Fisher, formerly vice president and sales manager, has been elected secretary-treasurer. Fisher will continue to supervise the sales of the company.

EDWIN J. SCHWANHAUSSER of Buffalo, New York, vice president, Worthington Pump and Machinery Corporation, has been elected to the corporation's board of directors, filling a vacancy created by the death of Edward T. Fishwick. Schwanhausser has been a vice president since 1939.

E. W. FARROW has been appointed representative of Missission Manufacturing Company in California. He formerly was sales manager for Security Engineering Company, and replaces Ralph Clemons, now with Petroleum Equipment Company.

R. S. JACKSON has been elected a vice president of the Independent Exploration Company, Houston, T. I. Harkins, president, has announced. Jackson, a graduate of Texas A. & M. College, joined the company in 1932 as an observer and has filled nearly every post on a geophysical party. in addition to being a vice president, he

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also is a field supervisor. He is a member of the Society of Exploration Geophysicists and Houston Geological Society.

W. W. ROBINSON of The Texas Company will address the Los Angeles Chapter of the American Institute of Mining and Metallurgical Engineers May 13 on "The Practical Side of Synthetic Rubber."

T. N. LAW has been elected president of Aero Exploration Company, Tulsa. Russell F. Hunt, former president, is lieutenant at Scotts field, Illinois.

H. C. PRICE, president of H. C. Price Company, Bartlesville, announces expansion of the company which specializes in welding of pipe lines and oil field casings, to include general pipe-line construction.

HARRY C. HANSZEN, Houston, was elected a trustee of Rice Institute, Houston, May 6.

LOUIS M. TREADWELL, 38, assistant counsel of Socony-Vacuum Oil Company in New York and chairman of the committee on admissions of the Bar Association of New York City, died in New York City last week. He became assistant counsel of the oil company in October, 1934.

WILLIAM G. BREWSTER, pioneer oil well surveyor, died at Ventura, California, April 26. Brewster started in the surveying of oil wells in 1924, with Alexander Anderson. He went to Eastman Oil Well Survey Corporation in 1932, where he was employed to the time of his death.

M. M. BATES, 59, veteran North Texas oil scout for Humble Oil & Refining Company, died May 5 at Wichita Falls. He had been ill for more than a year.

HARRY M. JOHNSON, 54, manager of Sun Oil Company's Kansas lease and scouting activities the past 20 years and an employe for 36 years, died April 18 of a heart attack at Wichita.

AL J. BRODERICK, 47, president of Broderick & Calvert, Inc., discoverer of Harper field, West Texas, died May 4 of a heart attack at Fort Worth. He was a native of New York City, and had operated jointly with George Calvert, co-owner of the firm, the past 23 years, having started in Smackover, Arkansas.

CHARLES V. LEE, 63, president of Lee Petroleum Corporation of San Angelo, Texas, died May 7, at Houston.

Squeaks from the Bull Wheel

Cautious

"I'll bet she will—"

"I wouldn't do that. You can never tell what a woman will do."

"But you interrupted me too soon. I was going to say that I would bet that she would do the unexpected."

"Even that is not a safe bet."

Sad End

"This letter says my dachshund died."

"What happened."

"He met his end going around a tree."

SOS

"Cup o' tea, weak," said a customer at a London coffee stall. When it was brought, he eyed it critically.

"Well, what's wrong with it; you said weak, didn't you?"

"Weak, yes," was the reply; "but not 'elpless."

Competition

"What was the cause of the collision at that corner today?"

"Two motorists after the same pedestrian."

Tell Tale

I've had this car a whole year and haven't paid a cent for repairs or upkeep since I bought it.

So the man at the service station was telling me.

Faux Pas

A newly married salesman was unable to get time off for a honeymoon and had to take his bride along through his territory. First morning the couple decided to order honey at breakfast, to symbolize they were honeymooners. The negro waiter arrived with the breakfast but no honey.

"George, where is my honey?"

"Don't know boss. She don't work here any more."

Definitions

"Daddy, what are bill collectors?"

"A bill collector, my son, is a man who combines business with pleasure."

Sympathy

"My baby is the living image of me."

"What do you care, so long as he's healthy?"

These Times

Prizes for advertising copy in The Oil Weekly last week go to M. D. Bryant, San Angelo, and Fred E. Cooper of Tulsa. Said Bryant in his ad:

"I have about quit selling crude oil but am raising some awful good bulls on my Spring Creek Ranch."

Fred E. Cooper's advertisement started off with a catch-line which well might be the title to a popular song:

"Uncle Sam Don't Need No Maypole Dancing Now!"

True to Type

"Is that man annoyed with you? I noticed he didn't return your greeting."

"Oh, he lives next door to me. He never returns anything."

1942 Calamity

"Yes, my wife has left me—ran away with another man in my car."

"Good heavens, man, not your new car?"

B.R.R. (Before Rubber Rationing)

He: I think I've got a flat tire.

She: I think that makes us even.

Every Move

Visitor to Mussolini: Why are you holding up that umbrella. The sky is blue and there's no rain.

Mussolini: Ah, but it's raining in Berlin.

Rank

"I have a pain in my abdomen," said the rookie to the Army doctor.

"Young man," replied the medico, "officers have abdomens; sergeants have stomachs; you have a bellyache."

That's All

"What," he asked, "has this fellow got that I haven't?"

And the girl answered, "Me."

Got the Germ

I hear Robinson is back in the hospital.

Yeah; he took a sudden turn for the nurse.

Effective Substitute

"Yes, I'm feeling better since the operation, but can't imagine how I got this bump on my head."

"Oh, I heard about that—in the middle of the operation they ran out of ether."

Tough Teddy

The three bears were taking a walk on the desert, so Goldilocks could eat the little bear's porridge.

Papa Bear sat on a cactus and said "Ouch!"

Mama Bear sat on a cactus and said "Ouch!"

The little Bear sat on a cactus and didn't say anything—just sat.

Mama Bear turned to Papa Bear. "Paw," she said, "I hope we're not raising one of those Dead End Kids."

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OUR INSTRUMENT and GAUGE RECONDITIONING SERVICE

FACTORY TRAINED ENGINEERS AND SERVICE MEN.

One Year Guarantee

Your favorite supply store will be happy to send in your old Gauges, Weight Indicators, Flowmeters, Etc.

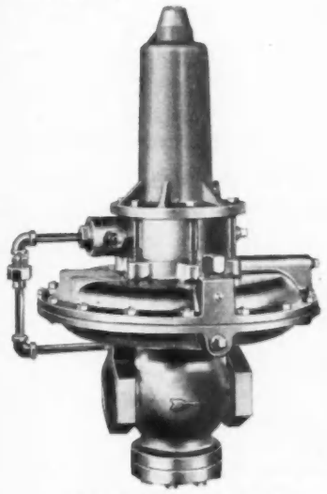
Notes for the Equipment Buyer and User

Regulators

PITTSBURGH EQUITABLE METER COMPANY

Pittsburgh Equitable Meter Company, 400 North Lexington Avenue, Pittsburgh, has announced the addition of a high-pressure series to the present line of EMCO "1001" gas pressure regulators.

As in the standard "1001" regulator, this model is furnished either for outlet or inlet pressure control. This high-pressure series regulator, which provides an outlet pressure range of up to 60 pounds per square inch maximum, is so designed as to cover the entire span between 5 pounds and 60 pounds with the same spring.



EMCO 1001 Regulator

It is furnished in one size only with 2-inch threaded connection for standard pipe. The manufacturer states that this regulator can be used to control air, manufactured or natural gas. Descriptive literature can be obtained from the manufacturer.

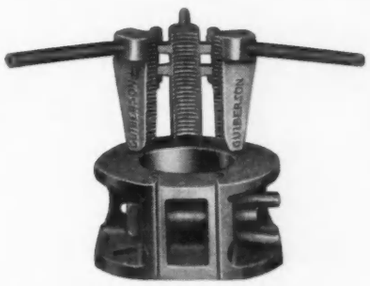
Tubing Spider

GUIBERSON CORPORATION

The Guiberson Corporation has announced the new type B spider, which helps to solve the problem of securing extreme light weight in a tubing spider yet capable of carrying the heaviest loads.

In this spider engineering and exhaustive tests have achieved strength that can be absolutely depended on to carry the heaviest loads, with light weight that assures utmost handling ease. The weight in all tubing sizes is 130 pounds or less. Slips have cored out backs and are extremely light and easy to handle.

Exhaustive tests have proved the strength and dependability of this tool. In the laboratory the bowl was supported on its outer edge and a static load of 235,000 pounds equivalent to 50,000 feet of 2-inch upset tubing was applied to a solid bar set in the slips. Upon examination of the spider after the test, no indication of the slightest damage could be found.



Guiberson Tubing Spider

To test support given the tubing by the slips, a short piece of 2½-inch tubing, J55 grade, was placed in slips and subjected to a pull of 120,000 pounds, equivalent of 20,000 feet of 2½-inch upset tubing. Upon examination of the tubing after the test, it was found to be true and unaffected by the slips.

Kelly Wipers

PATTERSON-BALLAGH CORPORATION

Patterson - Ballagh Corporation, Los Angeles, has introduced several new types of rubber wipers in order to provide an effective wiper to clean the kelly as it comes through the bushing. These now include octagonal and hexagonal wipers as well as the conventional square. Fittings have been developed for installation in Baash-Ross and Emsco types of kellys. The rubber wiping unit is bolted at the bottom of the kelly bushing and can be quickly removed for inspection. Arrangements can be made by purchasers of the bushings for installation of these wipers at the factories.

New York Nomads Told of Oil Industry Role in War

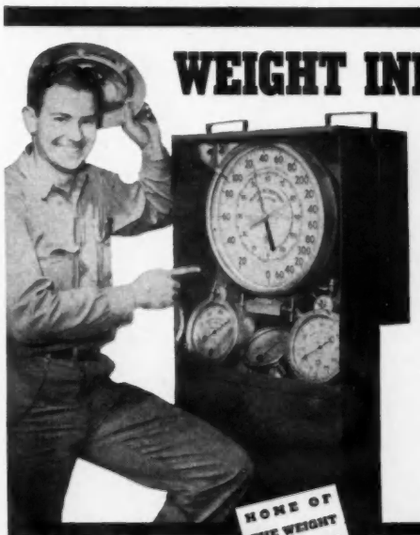
Men in the oil industry have a vital role in prosecution of the war, Joseph C. Rovensky, assistant coordinator of inter-American affairs, Washington, told the New York Chapter of Nomads last week at its inter-American relations dinner and reception.

Guests included men in all branches of the industry. Among foreign government representatives were C. T. Campodonico and J. N. Catinari, Argentine Government Oilfields; K. I. Lukashev, Soviet Purchasing Commission; and M. M. Gousev and E. S. Sergeev of Amtorg Trading Corporation.

Oil men have a great opportunity during the war and in the period of reconstruction afterward for promotion of better transportation, communications and general economic development in the countries where they are active, Rovensky told the chapter.

Russell D. Heath, chapter president, gave the welcome address. Rovensky was introduced by E. H. Trammell, Mission Manufacturing Company and Layne and Bowler Company, and entertainment committee member.

Among oil company representatives were: W. G. Foster, Anglo-American Purchasing Company; S. W. Adey and H. Cartwright Reid, Anglo-American Oil Company; T. G. Schad, Dr. R. Schider, S. J. Veensta, E. F. Carney and W. Jakubek, Asiatic Petroleum Company; D. G. Schnabel and W. M. Brown, Bahrein Petroleum Company; H. R. Powell, Caribbean Petroleum Company; L. M. Bound, Cities Service Company; C. W. Hamilton, H. E. Slater, and C. W. Woessner, Gulf Oil Corporation; B. C. Kitchen, International Petroleum Company; Chester Crebbs and Henry



WEIGHT INDICATOR POINTS

IT'S A WISE OPERATOR today who invests in equipment that doesn't require a lot of tinkering, adjustment and repair.

Take weight indicators and gauges, for example. If they're scattered all over the rig and subject to all kinds of abuse, they can go haywire just at the wrong time — with resultant inefficient drilling control, costly shutdowns and big repair bills

But unitize all those instruments in a compact steel box, with no connections to break and no fluid leaks. Put the box right in front of the driller where he can see his gauges—**and you'll have accurate, trouble-free drilling control for years. That's the Martin-Decker "Sealtite"—get the full details today!**

HOME OF THE WEIGHT INDICATOR

MARTIN DECKER CORP.

LONG BEACH, CALIFORNIA

SAN JOAQUIN VALLEY: A. F. McQUISTON, BAKERSFIELD, CALIFORNIA

MID-CONTINENT DISTRIBUTOR: REED ROLLER BIT COMPANY, HOUSTON, TEXAS

Forging Ahead

For the American Victory

OIL CITY BRASS WORKS
FOUNDERS MANUFACTURERS MACHINISTS
Beaumont, Texas, U.S.A.

The speaker's table at the New York Nomads meeting, left to right: George B. Flanigan, Chain Belt Company; Val. R. Wittich, Jr., Clark Brothers Company and Others; John H. Baird, Byron-Jackson Company; I. Frank Brown, Export Representative; Russell D. Heath, Westinghouse Electric International Company; Joseph C. Ravensky, assistant coordinator, Inter-American Affairs; E. H. Trammell, Mission Manufacturing Company and Layne and Bowler Company; J. A. Thomas, Parkersburg Rig and Reel Company; C. J. DeLay, Continental Emsco Company; E. H. Maland, Chiksan Tool Company.

SAVE TIME
IN CUTTING STUCK WIRE LINE

THE KINLEY CABLE CUTTING GUN was designed to cut and remove stuck wire line from the hole in the shortest length of time and with the least amount of trouble.

The gun can be lowered on the stuck line or on a Halliburton Line. After cutting operation is complete, a special crimper allows it to be retrieved on the line itself.

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For high boiler efficiency and low maintenance, investigate our feed water engineering service. Prevents scale formation...protects boiler from corrosion...prevents caustic embrittlement.

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916 S. PETERS STREET NEW ORLEANS, LA.

Riedell, Mene Grande Oil Company (Venezuela); Norval Baker, Near East Development Company; Leland Stanford and J. A. Rudden, Sinclair Refining Company.

B. B. Cox and Robert Siegel, Socony-Vacuum Oil Company; J. M. Sitler, G. H. White, Morgan Walker, G. M. Knebel, E. L. Linscott, R. D. Moriarty, and R. E. Watson, Standard Oil Company (New Jersey); H. G. Gibson, H. L. Kuhlken, G. R. Weeks and C. R. Paules, Standard Oil Development Company; E. W. Berlin, Fred Herrschaft, W. S. Lee and M. D. Roehm, Standard-Vacuum Oil Company; A. H. Stepney, J. P. McCulloch and H. Munster, The Texas Company; E. L. Trafford, Trinidad Leaseholds.

Inverson Tool Company Named Bucyrus-Erie Distributor

Iverson Tool Company, Tulsa, has been appointed distributor for Bucyrus-Erie spudders in Oklahoma, except the three Panhandle counties, which will continue to be served by Murray Tool & Supply Company, Pampa, Texas.

Iverson headquarters are at 215 West Second Street, Tulsa. There is also an Iverson store in Oklahoma City and a store and shop in Okmulgee.

In addition to the Oklahoma territory, Iverson is also distributor for Bucyrus-Erie spudders in Chaves, Eddy, Roosevelt and Lea counties, New Mexico, and part of West Texas. These territories are served by Iverson offices in Artesia and Fort Worth. Bucyrus-Erie spudder distributors in the Southwest work with the cooperation of the Bucyrus-Erie branch office, 1806 Tower Petroleum Building, Dallas.

Centrifugal Pumps

Pennsylvania Pump & Compressor Company, Easton, Pennsylvania, has issued a new bulletin, No. 238, covering the company's Thrustfre multistage centrifugal pumps in the 4-, 5-, 6- and 7-stage series.

Advertisers' Index

Index includes only advertisers in this issue. * Indicates detailed information on products and services included in 1942 edition of COMPOSITE CATALOG OF OIL FIELD AND PIPE LINE EQUIPMENT.

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General Heading: BAKER MODEL "K" CEMENT RETAINER

Unit No. A-11

Subject: Squeeze Cementing As An Economical Solution to Many Well Repair and Well Completion Problems

BAKER OIL TOOLS, INC.

Main Office and Factory:
6000 So. Boyle Ave., Box 127, Vernon Station, Los Angeles, Calif.
Central Division Office and Factory:
6023 Navigation Blvd., Box 3048, Houston, Texas
Export Sales Office:
19 Rector Street, New York, N. Y.

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Date: May 18, 1942
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One of the oil industry's most important responsibilities today is to see that each and every well be capable of maximum production for the longest possible period of time, with a minimum expenditure of ***time, money and materials.***

In this connection, "squeeze cementing" as a safe, economical solution to many well repair and well completion problems becomes increasingly important.

Thousands of such jobs have been successfully performed with the Baker Model "K" Cement Retainer, and details of two such typical jobs are given herein.

If you are confronted with water problems, or other well repair or completion problems, which may be solved through the use and proper placement of cement, check on the results other operators have secured with the Baker Model "K" Cement Retainer.

You can obtain details from any Baker office or field representative.

For complete details concerning design, construction and operation of the Baker Model "K" Cement Retainer, see pages 250-263 of the 1942 Baker or Composite Catalog.

Product No. 400
Baker Model "K" Cement Retainer

BAKER MODEL "K" CEMENT RETAINER

APPLICATIONS

Recementing
Cementing Behind Sections of Pipe
Reducing Gas/Oil Ratios
Plugging Off Bottom Fluids
Plugging Back to Upper Zones
Testing Upper Cased Formations
Squeeze Jobs
Cementing Off to Perforate for Production
Cementing Bad Pipe
Cementing Two Strings Together
Cementing Low-Pressure Zones
Use of Cement Retainer as Casing Bridge Plug

Service Note

Competent Baker men will service, make suggestions, and otherwise assist in securing best possible results.

JOB. NO. 1

PROBLEM:

To Repair Split in Casing Through Which Shale Was Entering and Hampering Pumping Operations.

METHOD:

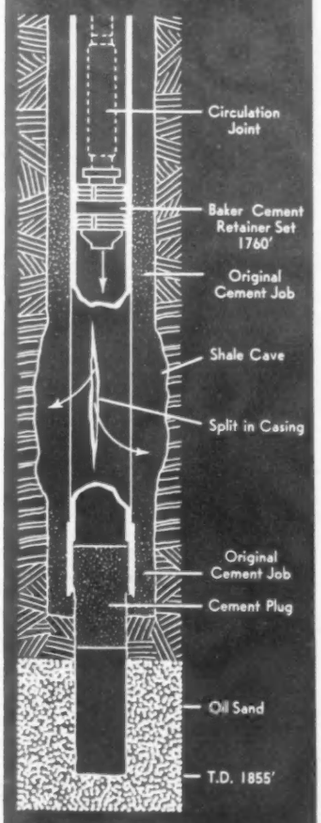
Set Baker Cement Retainer above Casing Split and Do Squeeze Job. (A Cement Bridge was Placed at Top of Producing Zone.)

RESULT:

100% Successful.

*** DETAILS ***

Field: *Salem, Illinois*
Depth of Well: *1855'*
Depth Retainer Set: *1760'*
Breakdown Pressure: *800 lbs.*
Final Pressure: *1000 lbs.*
Number of Sax Mixed: *30*
Number of Sax Put Away: *30*
How Cement Discharged: *Through Casing Split in Shoe Joint*



Squeeze Cementing with Baker Cement Retainer to Repair Casing Split

JOB NO. 2

PROBLEM:

To Reduce Gas/Oil Ratio in a Field Where Normal Ratio is 60,000:1.

METHOD:

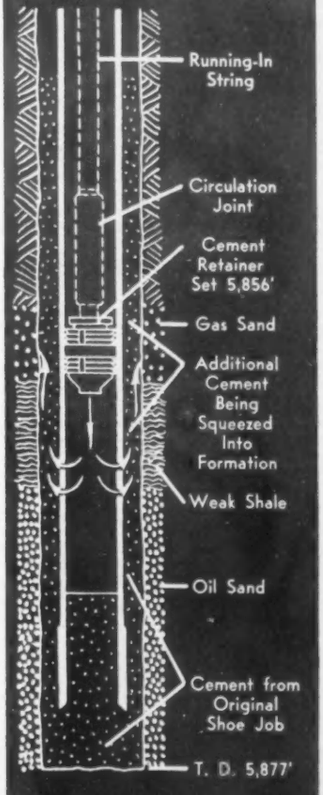
Before well completion Perform a Squeeze Cement Job with Baker Cement Retainer.

RESULT:

Well Completed with Gas/Oil Ratio of 550:1.

*** DETAILS ***

Field: *Grapeland, Texas*
Depth of Well: *5877'*
Depth Retainer Set: *5856'*
Breakdown Pressure: *1500 lbs.*
Final Pressure: *5000 lbs.*
Quantity of Cement Mixed: *125 sax*
Number of Sax Put Away: *13*
How Cement Discharged: *Through 20 shot perforations in Shoe Joint*



Reinforcing original Shoe Job by squeeze cementing with Baker Cement Retainer to insure exclusion of free gas.

JENSEN makes a clean, powerful unit with a minimum of moving parts and a maximum of valuable experience.

War-Time Advantages of JENSEN JACKS

JENSEN pumping equipment has been good for 23 years. JENSEN JACKS are particularly good now. Not only do they cut production costs every jump of the way, but they have the stubborn dependability so essential in any piece of war time equipment.

With a JENSEN UNIT, and particularly the DC model, you can balance any well so accurately that little power is needed, and the strokes are so smooth that everything above and below ground seems to give better service.

You can't tie a JENSEN. It gets the job done more satisfactorily than anything else yet devised, as evidenced by the fact that producers have made us the largest exclusive manufacturer of pumping equipment in the business.

If you are looking for unusual economy and efficiency, see your JENSEN dealer or wire us at Coffeyville.

JENSEN BROTHERS MANUFACTURING CO.

. . . Coffeyville, Kansas, U.S.A. . . .

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LOOKING AHEAD

. . . with the Editor

Special Arrangement of Mud Apparatus on Drilling Barges

Mud handling on drilling barges presents an entirely different problem than in fields where rigs are located on dry land. Many special features foreign to land rigs are part of standardized drilling barge equipment, while in addition to regular apparatus for mud, many operators have innovated original ideas which suit their particular needs.

In the coastal waters of Louisiana and Texas, marine fields are plentiful, and drilling barges dominate the scene. Many rigs have developed designs which permit installation of chemical heaters, special mixing equipment, and unusual loading devices, compactly arranged on the barges in convenient locations where members of the drilling personnel are able to quickly test and regulate mud to the desired qualifications.

Drilling barges utilize many features for handling mud, many of which land operations must sacrifice due to temporary nature of locations. Rigs form permanent units when placed on barges, and all equipment is arranged for long periods of utility, hence it is placed most advantageously for the work demanded of it. Permanence of barge designs allows crew to become thoroughly familiar with position of all apparatus and enables deriving from it the most service, adding to over-all efficiency.

A description of mud handling apparatus used on marine rigs provides an interesting subject which will be presented to readers of THE OIL WEEKLY at an early date. A full discussion of the usual arrangement of shale shakers, mud ditches, and slush pits will be given, as well as a summary of special devices observed in the field. Several illustrations will accompany the article to show type equipment used, giving conception of position on barge and relation to other equipment.

THE OIL WEEKLY, Published every Monday. Entered as second class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.